

ALAGAPPA UNIVERSITY

(Reaccredited with 'A' Grade by NAAC)
Karaikudi 630 003



DIRECTORATE OF DISTANCE EDUCATION

MBA (Project Management)

146



PAPER - 4.2

PROJECT CONTRACTING AND CLEARANCES

ALAGAPPA UNIVERSITY

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KARAIKUDI - 630 003, TAMILNADU

DIRECTORATE OF DISTANCE EDUCATION

M.B.A (PM)



Paper 4.2

Project Contracting and Clearances

(AU / DDE / D5 / Printing / Order 13/2016 Date : 16.09.2016 Copies 500)
Karthick Printers, Trichy.

Paper 4.2 PROJECT CONTRACTING AND CLEARANCES

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Principles of Project contracts: Concept of contract, offer and acceptance, contract objectives / packaging.

UNIT 2

Project Contracting: Principles – Contracting process – Compilation of contracts – 3 R's of Contracting: Responsibility, Risk and Reimbursement – Global tendering – Bidding and bid evaluation – Pricing terms and estimation – Project negotiation – Delivery terms and its significance – Negotiations for Projects : Significance of Negotiation, Objectives of Negotiation, Parameters negotiation, Pre-negotiation home work strategy and tactics.

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International Airport Authority, Railway clearance, Electricity clearance, Explosives clearance, Forest Clearance, State Industries Department Clearance.

REFERENCES:

1. Joy P.K, Total Project Management, Macmillan.
2. Gopalakrishnan P, Ramamoorthy VE, Textbook of Project Management, Macmillan.

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UNIT – I

PROJECT CONTRACTING

A contract as an agreement enforceable by law. A contract is "an agreement creating and defining obligations between the parties".

An agreement, to become a contract, must give rise to a legal obligation. The term 'obligation' is defined as a legal tie which imposes upon a definite person or persons the necessity of doing or abstaining from doing a definite act or acts. It may relate to social obligation is not a contract. It must give rise to a legal obligation in order to become a contract.

ESSENTIAL ELEMENTS OF A VALID CONTRACT

According to Sec. 10 all agreements are contracts if they are made by the free consent of parties competent to contract, for a lawful consideration and with a lawful object and are not hereby expressly declared to be void. In order to become a contract, an agreement must have the following essential elements:

1. Offer and acceptance

This involves two parties one party making the offer and the other party accepting it. The terms of the offer must be definite and the acceptance of the offer must be absolute and unconditional. The acceptance must also be according to the mode prescribed and must be communicated to the offeror.

2. Intention to create legal relationship

When the two parties enter into an agreement, their intention must be to create legal relationship between them. If there is no such intention on the part of the parties, there is no contract between them. Agreements of a social or domestic nature do not contemplate legal relations. As such they are not contracts.

3. Lawful consideration

The agreement to be enforceable by law must be supported by consideration. 'Consideration' means an advantage or benefit moving from one party to the other. It is the essence of a bargain. In simple words, it means

'something in return'. The agreement is legally enforceable only when both the parties give something and get something in return.

4. Capacity of parties of Competency

The parties to the agreement must be capable of entering into a valid contract. Every person is competent to contract if he (a) is of the age of majority, (b) is of sound mind, and (c) is not disqualified from contracting by any law to which he is subject.

5. Free and genuine consent

It is essential to the creation of every contract that there must be a free and genuine consent of the parties to the agreement. The consent of the parties is said to be free when they are of the same mind on all the material terms of the contract.

6. Lawful object

The object of the agreement must be lawful. In other words, it must not be (a) illegal. (b) immoral, or (c) opposed to public policy.

7. Agreement not declared void

The agreement must not have been expressly declared void by any law in force in the country.

8. Certainty and possibility of performance

The agreement must be certain and not vague or indefinite.

9. Legal formalities

A contract may be made by words spoken or written. As regards the legal effects, there is no difference between a contract in writing and a contract made by word of mouth. It is, however, in the interest of the parties that the contract should be in writing. There are some other formalities also which have to be complied with in order to make an agreement legally enforceable. In some cases, the document in which the contract is incorporated is to be stamped. In some other cases, a contract, besides being a written one, has to be registered. Thus where there is a statutory requirement that a contract should be made in writing or in the presence of witnesses or registered, the required statutory formalities must be complied with.

Project Contracts

The project charter and the organizational arrangement accords the project manager take appropriate authority over the in-house resources. But not all projects can be executed with in-house resources and the project manager has to requisition extra-organizational resources for the execution of the project. When a project manager has to get things done with resources over which he has no direct authority, it becomes necessary to acquire the required authority in lieu of some considerations. Such an arrangement can be termed as a contract and the authority so acquired as contractual authority. If this authority is acquired in-house through a contract, then the process can be termed as internal contracting. All other contracts for the acquisition of authority can be termed as business contracts.

Business Contracts

A Contract as such is an agreement between two or more parties in writing, to do or not to do certain things. Business contracts are those agreements which are enforceable at law. They are entered between two or more competent parties for a legal consideration which is usually payment in the form of money. For an internal contract the consideration is normally absent. Legally, of course, a contract can be valid even though there may not be any consideration, but then it is not a business contract.

In order to enter into a contract, there must be an offer or proposal signifying the willingness of one party to do or abstain from doing something at the desire of the other party. The desire of the other party is expressed in the enquiry often known as Notice Inviting Tender (NIT) and the offer to carry out the services at certain terms is known as Tender.

The sequence of events resulting in a business contract are as shown below:

Enquiry	Issue of NIT to selected parties or to the newspapers by the project authority and sale of tender document.

Offer	Submission of the tender document by the bidder
Acceptance	Communication from the recipient of the offer to the bidder indicating intent to enter into an agreement and acceptance of the same by the bidder.
Agreement	Offer and considerations as a accepted given a legal form and content duly signed by competent authorities of both parties.
Contract	The contract consists of an agreement on stamped paper, a detailed letter of intent with agreed variations and the original tender document.

Contractor's Obligations

Clauses headed "Contractor's obligations" cover general provisions such as:

- Obligation to construct the facility in accordance with the project specifications;
- Applicable standards and codes;
- Order of precedence of contract documents;
- Obligation of the contractor to request for additional information.
- Obligation of the contractor to check and verify company information.
- Occasionally, contractors may be required to assume liability for correctness and completeness of the information furnished by the client. As a principle this is not acceptable because it implies that a contractor is responsible for any mistakes made by the client.
- Obligation of the contractor to assume responsibility for scheduling progress reporting, forecasting, etc.,
- Obligation of contractors to work out detailed work package.
- Statement that the contractor is fully knowledgeable of site conditions and other local conditions (weather, access to site, etc.). Liability for subsoil

conditions and other things that cannot be detected by simple visual check should be excluded.

- Obligation of the contractor to keep and to maintain the site clean;
- Obligation to inform the client of problems and other important matters affecting the Project in general.
- Anything not included in the client's information but that logically should have been included shall be deemed to be included.

Client's Obligations

The list of the client's obligations tends to be far shorter. Contractors should try to add an umbrella provision to the effect that anything not specifically included in the lump sum shall be deemed to be excluded (and thereby becomes reimbursable). When the client wants to review or approve certain drawings and information, an approval time of say 10 working days should be added, following which the drawings, etc., shall be deemed to be approved. Any client changes after those 10 days shall constitute a change in the order with price and time repercussions.

Clients are usually responsible for obtaining permits and other official authorizations, the supply of utilities (including construction utilities) and feedstock, telephone and other communications' facilities, canteen, toilets, fencing, guards, roads, lighting, storage facilities, warehouse, etc.

METHODS OF CONTRACTING

BOOT

There has been a growing trend in the recent past both in the developing and developed countries, of encouraging private sector to participate in various projects through concessions labeled as BOOT project strategies. The term BOOT was introduced in the early 80s by the Turkish Prime Minister Turgat Ozal to designate a 'build, own and transfer' or 'build, operate and transfer' project; this term is often referred to as the Ozal formula.

Smith and Merna defines BOOT as: "a project based on the granting of a concession by the principal, usually a government, to a promoter, sometimes

known as the concessionaire, who is responsible for the construction, financing, operating and maintaining the facility over the period of concession before finally transferring the facility, at no cost to the principal, as a fully operational facility. During the concession period the promoter owns and operates the facilities and tries to recover the costs of investment, maintenance while operating the facility to result a margin of profit".

The related acronyms used to describe concession contracts include:

- FBOOT : Finance – Build – Own – Operate – Transfer
- BOO : Build – Own – Operate
- BOL : Build – Operate – Lease
- DBOM : Design – Build – Operate – Maintain
- DBOT : Design – Build – Operate – Transfer
- BOD : Build – Operate – Deliver
- BOOST : Build – Own – operate – Subsides – Transfer
- BRT : Build – Rent – Transfer
- BTO : Build – Transfer – Operate
- BOT : Build – Operate – Transfer

Features of BOT model

The salient features of BOOT model can be identified as:

- A joint venture (JV) company would be formed to implement the project. Members of the JV would include foreign contractors and eventual operators of the project each having global recognition. Possibilities may exist for local electricity authorities or any other acceptable local entities to opt for an equity stake in the JV.
- The JV then raises 100% finance as required. It also arranges for construction of the project through commencement to completion.
- During the operating phase, the JV assumes commercial responsibility for managing the project.

- A supply consortium would be formed with the major project suppliers and contractors.
- The JV then enters into a turnkey power plant supply contract with the supply consortium.
- At the end of the project operation period (say ten years after commencement of operation) it is intended that the host government would purchase the shares from the investors in the JV based on a predetermined formula.

The Major components of a BOOT project include:

- Build-design, procure, manage construct and finance the project implementation.
- Own-own the asset during concession period and the license for the equipment used.
- Operate-manage and operate plant, carry out maintenance, delivery product or service and receive offtake payment.
- Transfer-hand over the plant in operating condition at the end of the concession period.

BOOT Packages

BOOT contracts may be determined by four major packages:

Construction Packages

Comprises all the components associated with building a facility, normally undertaken in the pre-completion phase and includes: feasibility studies, site investigation, design, construction, supervision, land purchase, commissioning, procurement, insurances and legal contracts.

Operational Package

Comprises all the components associated with operating and where applicable owning the facility and includes: operation, maintenance, training,

offtake, supply, transfer, consumables, insurances, guarantees, warranties, licenses, and power contracts.

Financial Package

Comprises all the components associated with debt finance, equity finance, standby loan agreements, shareholders agreements, currency contracts and debt service arrangements for financing the building.

Revenue Package

Comprises all the components associated with revenue generation and includes: demand analysis, duty and tariff levels, assignment of revenues, tariff structures and revenues from associated developments.

Advantages of BOOT Project

The BOOT project offers both direct and indirect advantages exclusively for developing countries like India as follows:

- Promoting private investment
- Completing projects on time without cost overruns.
- Good management and efficient operation.
- Transfer of new and advanced technology
- Utilising foreign companies' resources
- Injecting new foreign capital into the economy
- Providing additional financial source for priority sector projects
- Allowing no inroads on public debt
- Releasing the burden on public budget for infrastructure development
- Creating positive effect on the credibility of the host country.

The general advantages of BOOT projects are:

1. This would offer the possibility of realizing a project that would otherwise not be built by either the host government or its entrepreneurs.
2. The willingness of equity investors and lenders to accept the risks would indicate that the project was commercially viable.

3. The promoters control and continuing economic interest in design, construction and operation of a project will result in significant cost effectiveness, which will benefit the host country in many respects. This may also reduce the overall cost involved in undertaking any mega-projects for public welfare. Efficiency and effectiveness are inevitable in developing highways, mass transport systems, telenetworks etc, of public utilities which demand huge funds.

4. The usefulness to the host government to use a BOOT project as a benchmark to measure the efficiency of a similar public sector project. In general public sector projects exhibit cost and time overruns which can be reduced to a great extent by using the benchmarking effect.

5. The continued direct involvement of the project company would promote a continuous transfer of technology, which would ultimately be passed on to the host country. A strong training program would leave a fully trained local staff at the end of the concession period.

6. A BOOT project has an obvious appeal to a government seeking to move its domestic economy into private sector and especially for Third World countries where public sectors have become white elephants.

Disadvantages

1. Commercial lenders and export credit guarantee agencies will be constrained by the same host country risks whether or not the BOOT approach is adopted.

2. This benefit may be lost if the host government provides too much support to a BOOT project, resulting in the promoter bearing no real risk.

3. A BOOT project is a highly complicated cost structure, which requires time, money, patience and sophistication to negotiate and bring it tc fruition.

4. Efficiency landmarks that are generally set under BOOT project are quite high. These benchmarks might create crisis on the part of executives who may not perform upto the required standards under such projects. The project may be a futile boondoggle under such prescribed environment.

5. Change in the form of technology may be strongly resisted by the existing staff members of any government organisation.

6. Political influences may permeate this smooth process of encouraging privatization and become an obstacle while executing important sectoral projects.

TURNKEY PROJECTS

Engineers and Contractors take a single commitment for the design, engineering, procurement, delivery, construction, erection and commissioning of the project and training of operating and maintenance of personnel.

Two types of turnkeys are

1. Lumpsum
2. Fee plus reimbursement

Turnkey contracts are used for complete plants. Usual turnkey contracts have some sort of advanced technical know-how, which limits the number of competitors that can bid-know-how for construction and operation of the plant. In turnkey projects, the owner is not involved until the project / plant is ready for operation / commission. But, companies required some involvement during the execution. As a result, the turnkey contract now carefully detail the company's rights and responsibilities.

Turnkey Contracting

A turnkey contract may be defined as: "a single contractor acquires a sets all necessary premises, equipment, and suppliers operating personal to bring project to state of operational readiness. All that the customer needs to do is to turn the key to begin full effective usage of the new facility. Some times the contractor continues to assume operational control. Turnkey facilities are appropriate for customers who are unable to perform or wish to avoid their own subcontracting for ordering and testing components acquired from several vendors. Recruiting, screening and training is a highly specialized task. A turnkey contractor is compensated either through surcharges on each item or thorough services procured for the facility or by a commitment in advance to a fixed price".

Therefore, turnkey contract may help in cutting down the number of responsibility centres to the extent of one. In a turnkey project in a single contractor has complete responsibility to supply the owner a plant which is complete and ready for the owner to operate by simply turning the key. Turnkey thus is an expression for the extent of responsibility that a contractor undertakes; it is not to be mixed up with the commercial and payments terms. Turn-key would not necessarily mean a fixed price contract; it is quite possible for engineering consultancy organizations to undertake turnkey responsibilities for projects even without having capabilities of supplying and financing. On the other hand, in a lumpsum turnkey contract a contractor offers the owner a complete plant for a single price. Even when a turnkey contract is entered into the process of dividing the work does not totally stop with the decision to go turnkey. It only reduces the number of agencies the owner is required to coordinate. The turnkey contractor, in turn will be required to subdivide the work further as it is not possible to have all the capabilities required for a complex project under one single roof.

Advantages of Turnkey Contract

In projects that are undertaken by government or state-owned enterprises. Ownership and control after the completion of contract is retained with the owner. This is especially true in the case of traditional turnkey contracts, where the involvement of the turnkey contractor could be eliminated once the contract is completed, as he has no share in capital ownership, and hence there would be no conflict as regards policies and management of the operations of the enterprise.

In the turnkey contract a major advantage to the promoter stems from the fact that the responsibility for the contract lies with a single source and the promoter is relieved from responsibilities for the equipment or plant and performance.

The turnkey contract generally ensures that the projects are put into operation more rapidly than other contracts since both design and construction are the responsibility of one entity.

When a turnkey contract extends beyond the commissioning stage the teething problems of a multidisciplinary project can be resolved by the contractor's in house trained personnel.

Disadvantages of Turnkey Contract

The cost of a turnkey contract may be significantly higher than that of a traditional form of contract because cost estimates are often expressed in overall terms without a detailed breakdown of costs.

The turnkey contract does not allow the promoter to participate or become familiarize with the facility that the promoter will operate after the handling over of project contract is engineering company.

The turnkey contract does not permit him normal checking procedure by the sponsor, as is usually associated with a traditional form of contract.

The turnkey contract cannot be adopted when in house technological services are sought to be developed by the promoter as it leads to internal conflicts.

EPC (Engineering, Procurement and Construction)

This method of contracting is a step behind turn-key approach where the contractor is responsible for complete engineering, procurement and construction of the entire project complex. The contractor is also responsible for process design and basic engineering of 'open art process units', although process design and basic engineering of licensed units is obtained from process licensers through approach where multi-split contracts are in practice. In the MSC (Multi-split contracts), the project implementation was performed in different phases by different contractors. The traditional projects were either based on cost reimbursable basis or handled on a multi-split contract basis. It was cumbersome for the project team to have a perfect coordination between many outside parties with that of the internal structure. To overcome this difficulty specially in managing mega projects where time, cost and performance play equally important roles project management is its breed in a turnkey contract execution mode, the individual contractor is responsible for complete execution of the project including process design, basic engineering, detailed engineering, procurement, construction, commissioning and the performance guarantees.

Advantages of EPC Projects

1. Single project responsibility helps manage the total project without any impediments.
2. As the company is authorised to execute the project at agreed terms without project sponsor's intervention may smoothen the implementation process and remain and less susceptible to time overrun.
3. Decision making to procurement, design, engineering, and construction aspects can be processed quickly.
4. Little or no competition from small contractors since only by contractors undertake this type of total project execution.

Disadvantages

1. This may create power crisis in the project organisation leading to non-coordination with EPC contractor.
2. Non involvement or sleek participation of project authorities may create a communication gap which may be detrimental to the total performance. Non coordination from project authorities may hinder smooth flow of information that is essential for critical decisions on implementation.
3. The rigidity of contractual obligations may also affect changes in design, and construction methods and dissatisfy the client on completion.

Dominant nature of contracting company might deliver goods as it is desired giving some reasons and is a costly option for welfare projects.

Design / Build Contracts

The pit owner selects a consulting engineer to develop a preliminary design package, which may represent 25-30% of overall design and is sufficient to allow the pit to put for tender-so that the contractor completes the design and construct the plant.

Advantage over turnkey is that in allows the owner, a better change of defining exactly what he wants, rather than what the contractor thinks he needs.

Semi-Turnkey or Component Contracts

Contractor gives subcontracts for the supply, delivery, construction and installation of selected elements of a pit facility on a lumpsum turnkey basis.

In LDCs, this is adopted to reduce the overall lumpsum price substantially.

This can also be done by the owner.

Traditional Design / Bid / Build Contract

This is the traditional contract in LDCs, especially for infrastructure.

The project is divided in two types, design and build.

Owner hires independent consulting engineer to design the pit fully and puts it for tender. Then the consulting engineer is retained to be the owner's representative during the construction phase.

In complex pits, a fast-track approach is adopted whereby the pit is divided into separate overlapping design/bid/build packages.

Construction Pit Management Contracts

Under this type,

The contractor delivers the process design or process technology and pit management services.

Owner remains responsible for some of the design, construction, erection, startup and marketing, white.

Contractor is responsible for pit management, process technology, process design, training and operational management.

Self Assessment Questions

1. What do you mean by the term 'project contracting'? Explain its significance.
2. Explain the basic principles of project contracting.
3. Explain the different forms of Project Contracting process.

4. What is BOOT Contracting? Explain its significance.
5. Explain the components of BOOT contract package.
6. What is Turn Key Project? Explain its merits and demerits.
7. What is EPC Contracting? Explain its features.

UNIT – II

CONTRACTING PROCESS

All the project activities have to be successfully carried out within the stipulated time and cost. It can be done either by the project promoter himself or through project contracting. This will pave the way for creating a tangible entity to a project there by project will come into reality. Engineering procurement and construction are the three major tasks in project execution. Among them construction is the process through which the engineering, materials and man power are converted into physical entity. This process is a complex one and encompasses various aspects like contractor's selection, negotiation, evaluation, contract pricing etc.,

Contracting is a process of establishing relationship between the owner and the contractors to execute the project work, mainly construction. It is many legal and commercial facets and requires expertise knowledge and lot of practical exposure.

PRINCIPLES OF CONTRACTING (R's of Contracting)

Contracting, whether it is for a consideration or otherwise, is an essential arrangement for getting work done in an environment where authority relationships and responsibility delineations are unclear or non-existent. It is said that contracting is practiced even in a domestic environment where parents obtain desired behaviour from a child for a certain consideration. The same continuous without our being aware of it in all our social relationships. Knowledge of contracting is, therefore, as much a basic requirement for day-to-day living as that of the three R's.

If one chooses not to over-play the legal aspects, contracting itself can be found to constitute the 3 'R's only. The 3 'R's in the case of contracting are: Responsibility, Reimbursement and Risk.

I. Responsibility

The first 'R' in a typical contract covers issues such as:

1. What to parcel out to the contractors and what to retain.

2. How to define the work parcels so that the contractors know their scope precisely and there is no overlapping, undefined, unallocated or ambiguous work areas.
3. What are the relevant performance parameters for fulfillment of which contractors must assume responsibility.

Collectively, the above are often referred to as scope of work. Schedule of work, technical specifications, scope drawings, special conditions of contract, responsibility of matrix and special write-ups in appropriate combinations are used in ensure clarity.

Contract Planning

The factors listed below may be considered while taking a decision on the number of contracts.

1. Specialty of the works
2. Location of the work sites
3. Value of the contract
4. Availability of contractors
5. Need to accommodate local contractors
6. Need to obtain performance guarantee for a system from a single party.
7. Concern for early completion
8. Concern for completion at minimum cost
9. Concern for top quality
10. Current work load of the contractor and capability of the contractors.
11. Time schedule of the work
12. Political pressure

II. Reimbursement

The second 'R' of a contact refers to the type of reimbursement and it is as important as the first 'R'. Perhaps this 'R' is more important for the contractor than the owner. While the owner may refer to the responsibility to describe the contract arrangement, the contractor may choose to refer to it by the

types of reimbursement such as lumpsum contract, item rate contract, etc. We shall, however, prefer to use responsibility as the basis for assigning any name to a contractual arrangement.

Lumpsum Vs. Cost-plus

In order to make a lumpsum offer a contractor would like to have all the details. If the details are not known he would like to build contingencies in his price to take care of the unknowns. It is this aspect of pricing that can make a lumpsum contract more expensive than a cost-plus contract.

On the other hand, if the work can be framed out by the owner at a fixed price, the owner would know at a very early stage of the project his total liability and also if he is going to be within the approved budget or not. His anxieties to that extent will be less. With cost-plus contract, the owner would not have the advantage of knowing what the total cost is going to be till a very late stage. The owner will therefore, be anxious all the time due to this uncertainty. Naturally, wherever possible the owner would like to go for a lumpsum contract.

The speciality of the cost-plus contract is the opportunity it provides to start work immediately, thus eliminating the need for detailed scope definition and preliminary engineering by the contractor in submission of his proposal. It allows flexibility to the owner to change his mind at any stage without being forced to pay exorbitantly. The owner can also upgrade his design, specification and quality of construction without any objection from the contractor.

III. Risk factor

The last 'R' of a contract refers to the risk factors. Both the owner and the contractors are so much concerned about this 'R', that most of the pages of a contract deal with only this matter. In fact, a contract is considered to be an instrument for transfer of risk from the owner to the contractor, and necessarily this should evoke some resistance from the contractor. The least that a contractor would do is to seek protection in one form or other. But while the contractor risks only his fee, the owner runs the risk of not having his plant at all. Naturally, the owner would seek more protection and would not like to take any risk against which he does not have adequate insurance. The insurance, however, cannot be always in the form of a financial insurance policy. Only small risks can be covered by insurance and a little more protection may be

provided in the contract document. However, most of the risks are usually covered when contracts are awarded through a proven contracting process.

Tendering and Selection of Contractor

A contract presumes that the parties entering into a contract are competent and normal. But if, for instance, the contractor selected for a specific work is not competent technically, financially or managerially, then the risks will multiply several times. This uncertainty must, therefore, be resolved at the first instance. A well laid out procedure for prequalification of contractors and tendering can resolve this uncertainty. Such a procedure is known as tendering procedure.

A tender may be defined as an offer to carry out certain work or supply certain material or services in accordance with clearly detailed descriptions and conditions. The tendering procedure deals with prequalification of contractors, preparation of tender documents, mode of floatation of enquiry, receipt of tender guidelines for evaluation of tenders and selection of contractor. We will discuss this in some details in the context of reducing risk and uncertainty in the execution of a project.

The need for contractors originally arose because plant sizes grew to such an extent that it became almost impossible for the traditional equipment suppliers to perform their own function efficiently as well as to deal with the organisation, administration and overall design problems connected with complete plant projects. Bearing in mind that a contracting firm will usually tender only for plants worth several million dollars, it will be appreciated that the preparation of a tender is a major operation in itself and may cost (in the case of a substantial project) up to US $250,000. The cost of preparing turnkey tenders may be reestimated between 1 and 2 per cent of the value of the project, unless it is a repeat project (such as a complete plant of a similar size).

In the case of large projects, there are likely to be only two or three competitors tendering, and they are often pre-selected once they have an established reputation in the same or similar fields with projects of the same order of magnitude. In fact, some firms now prefer or by-pass the procedure of competitive tendering altogether on some projects because of the cost involved and instead to negotiate direct with a single favoured contractor. Nevertheless, a

contractor must have the facilities available to tender for complete plants on a lump sum turnkey basis, if necessary.

Prequalification of Contractors

For prequalification of tenders, notifications are issued in the press, at embassies etc. as appropriate giving details such as name of the purchaser / engineer, outline of the project, enquiry issue and tender submission dates, instructions for applying for prequalification and submission date for the contractor's prequalification data.

Normally, a prequalification document, issued on request to a contractor seeks information on the organization, experience in the intended type of work, availability of resources like managerial, technical, labour and plant, and also asks for financial statements. The contractor desirous of prequalification responds to the questionnaire and such details as may enable his qualification.

The data supplied by the contractors are evaluated for the preparation of a short list. The purchaser or his engineer would normally select a contractor for inclusion in the short list of tenders if:

1. He has had similar experience earlier and his performance reports for previous contracts are satisfactory.
2. His past turnover and present financial commitments indicate no constraint on fund availability for execution of the proposed contract.
3. He has the necessary infrastructure, adequate technical manpower, construction equipment and his present commitments would not prevent him from executing the proposed assignment satisfactorily.
4. His credibility in terms of his associates and associations with other agencies including foreign agencies, job performance and relationship with customers are sound.

After evaluation, the short-listed contractors are informed about their selected and their confirmation obtained as to whether they will submit the tender.

Preparation of Tender Documents

A tender document is prepared by the purchaser / engineer in as detailed and clear manner as possible to define the technical requirements of the work involved as also the responsibilities which the purchaser and contractor will have to share between themselves. A good tender document will include the following:

1. Letter of invitation to tender
2. Instruction to tenderers
3. General conditions of contract
4. Technical specifications
5. Special conditions of contract
6. Scope drawings
7. Bill of quantities
8. General information about site
9. Form of tender

Professional institutions like Institute of Mechanical Engineers have also standardized the tender form. A tender form for supply and erection of plant and machinery may cover the following items it the order listed below:

1. Prices
2. Programme
3. Terms of payment
4. Conditions of contract
5. Contract price adjustment
6. Validity

The document is then issued to the short-listed contractors for submission of their tender.

Receipt of Tenders

The tenderers may make a request to visit the site. Normally, the purchaser / engineer accompanies the tenderes to the site and provides further information. There may be a pre-bid conference to clarify the various issues to the tenderers. Supplementary queries can be clarified through correspondence till the due date for the bidding. On the due date bids may be opened in front of the tenderers present. The purchaser / engineer will announce and record the names of tenderers and prices including prices of alternative tenders. They would also announce and record the names to tenderers, if any, who are disqualified due to late submission.

Evaluation of Tenders

The tenders are evaluated from technical, commercial, contractual and managerial angles. Contractor's confirmation or classifications are sought on various matters which either do not conform the tender requirements or those that have not been offered by the contractor. The correspondence may reduce the points of disagreement but a post-bid meeting often cannot be avoided. Normally, separate meetings are held with each contractor to obtain clarification and also to bring all the offers in line with the tender requirement.

The actual evaluation process includes checking the acceptability of the offer against technical specifications, management specification and various commercial and contractual terms and conditions. An adjusted contract price will be arrived at in each case. Normally, the lowest bidder who is also technically and managerially acceptable is awarded the contract.

Agreement

An agreement is now to be signed on a stamped paper. The form of agreement is probably the most standardized document. The form of agreement refers to the various documents which will together from the contract. The accompanying documents normally are:

1. Original tender papers comprising the conditions of contract, specifications, dates, drawings and other relevant information.

2. Schedule of rates/prices including those for engaging workmen, equipment, etc., for contingent works required during execution not envisaged at the tendering stage.
3. A list of deviations from original tender stipulations as mutually agreed upon between the purchaser and the contractor after discussions.
4. Other relevant attachments

Form of Guarantee

Finally, whenever required, a guarantee from sureties in the following standard form of IMechE may be asked from the contractor as an insurance against uncertainties in dealings with the contractor.

By an agreement dated and made between the purchaser and the contractor the parties enter into a contract as stated below:

Now we hereby jointly and individually guarantee to the purchaser punctual, true and faithful performance and observance by the contractor of the covenant on his part contained in the said agreement and undertake to be responsible to the purchaser, his legal personal representatives, successors or assigns as sureties for the contractor for the payment by him of all sums of money losses, damages, cost charges and expenses that may become due or payable to the purchaser from the contractor in consequence of default in the performance. Nevertheless, the total amount to be demanded shall not exceed 15 per cent of the contract price.

This guarantee shall not be revocable by notice and our liabilities as sureties hereunder shall not be impaired by any alterations made or agreed to in the general conditions of contract.

Types of Tendering Process

Unfortunately for the contractor, a high proportion of inquiries are, for one reason or another, not very serious. This tends to occur mainly in countries where the infrastructure may not yet be ready for a particular type of plant. It is upto the contractor to assess the seriousness of each inquiry. The tendering

policy of most contractors can be categorized into one of the following three types.

Highly selective tendering

This is often historical in origin and is followed by contractors with long experience with a certain industry, product of process. This type of tendering has the advantage of low costs and a high proportion of successful contracts achieved by negotiation rather than competition. The danger is that the contractor is susceptible to changes in the industry concerned and to technological innovations.

Moderately selective tendering

This is the most common type, particularly among European contractors whose favoured fields of operation are discernible. The danger is that firms can become too complacent or, on the contrary, that they are unable to restrict their activities.

Indiscrimiante tendering

This is tendering for all projects without regard to the type and / or value. While a broad front is offered, a large number of small contracts must often be undertaken with a disproportionate amount of supervision and design cot, giving rise to high tendering costs. The acceptance rate is generally lower than for more selective tendering.

Moderately selective tendering is thus to be preferred by the majority of contractors, although all may well claim to follow this type of procedure.

The tendering period also varies considerably. If this is too short, an inaccurate tender with a large number of qualifications and exclusion clauses can result. On the other hand, a tendering period is rarely considered by the contractor to be too long. A point worth noting is that many contractors are reluctant to request an extension of tendering time for fear that this gives the potential client an impression of inefficiency. Yet it is usually better to seek such an extension rather than to submit an inaccurate tender.

Prior to a client asking for bids for a plant, a feasibility study is necessary. This may be conducted by the client itself, by an independent consultancy organization or in some cases by the contractor. Such a feasibility study may be preceded by an advisability study that initially defines the project and assesses

its possible attractiveness; this is usually carried out by the client. The feasibility study itself examines the markets for the products to be manufactured (with due regard for supplies, technological restraints, plant location, financial constraints and time schedule) in order to determine the overall economic feasibility. Based on the results of the feasibility study, a summary initial schedule is devised, usually comprising three parts namely: advantages and disadvantages of various solutions and reasons for choice of the recommended solution; full information on the recommended proposition; a summary estimate of costs.

This schedule can be enlarged and refined to form the basis for decisions concerning the technical, financial and managerial aspects of the project. Additional inputs might include: descriptive and explanatory memoranda indicating construction and operating methods, breakdown of supplies and equipment leading to particular specifications, time schedules, the margins of risk; technical files comprising overall plans and drawings of the main components of the plant; an evaluation (to within ± 10 percent) of the costs and expenses entailed.

From this detailed initial schedule, the final schedule will be drawn up. This will contain detailed technical specifications and work plans, definitions of the work to be carried out by different specialists, the timing and an estimate of expenses broken down as accurately as possible. The calls for tenders are then based on the description given in this final schedule. They contain the specifications of the plant and its components, including civil and other works, as well as appropriate administrative and commercial clauses.

If the client does not already have a list of approved contractors, interested contractors may be invited to submit prequalification documents. The purpose of these is to ensure that firms making bids are technically and financially sound.

There is a wide variation in the amount of information that is provided to the contractor under different types of tender. The main types of tender comprise those involving the detailed design, procurement, erection and commissioning of a plant or unit employing a specific process. The design content an vary considerably within an agreed definition. The other major type concerns the overall design and procurement of a plant to meet a stated performance. The contractor in this case is able to utilize its choice of available processes.

Many contractors will classify the type of bid in order to define the amount of work to be performed by their staff into three different categories. An approximate estimate bid contains no original detail but is based on previous projects of similar scope and capacity. An order of magnitude bid is usually required for a plant feasibility evaluation by the client. No original engineering details are given and the bid us constructed from cost-capital cures and an approximation based on past estimates and scaling factors. The definitive estimate is based on a defined engineering data with complete plot plans and elevations, piping and instrumentation diagrams, equipment data sheets and quotations, structural sketches, soil data and a complete specification. For the compilation of such an estimate, the contractor may, in turn, obtain bids on 50 to 90 per cent of all the process equipment required. The contents of a typical tender of this type are shown in the figure 5, the proposal being divided in three sections: technical data, commercial data and cost data.

CONTENTS OF A TENDER

1. Technical Proposal

Project schedule	Schedule of professional staff
Process description	Resume of key personnel
Operating requirements	Project management policy
Plot-plans and elevations	Engineering department descriptions
Process flow diagrams	Construction department descriptions
Engineering flow diagrams	Procurement department descriptions
Utilities flow diagrams	Financial control descriptions
Heat balance	Lists of reference plants
Materials balance	
Equipment list and data sheets	Cost proposal

Facilities - piping - instrumentation - electrical - civil engineering - construction	Total price for services offered Total breakdown by materials Price breakdown by materials Labour and Overheads Amount of subcontract work Amount for offsite facilities Tax provisions

Specification -Clients -Contractors Services provided	Royalty provisions Alternative systems Optional equipment Price adjustments

-by clients -by contractors Model of proposed plant	Escalation and penalty clauses Schedule of payments

2. Commercial proposal

Introduction and background Origin of the company	

For large-scale tenders, the contractor usually appoints a proposal manager to co-ordinate the whole proposal preparation and to liaise with the client. This applies especially to the larger contracting companies.

For major contracts, bidding contractors may be required to deposit bid-bonds when making their tenders in order to ensure the seriousness of their

tender and to guarantee the customer against the waiving of the bid if the company is selected. These bid-bonds usually amount to between 1 and 2 per cent of the contract table.

Tender are all opened at the same time, and examined and compared with the aid of a table showing the main data. In some developing countries, a preferential coefficient (X) may be given to local firms, and foreign contractors are selected only if their prices are at least X per cent below the lowest local bid. This co-efficient may vary widely but it can be as high as 30 per cent.

Comparison of tenders does not necessarily lead automatically to the choice of a contractor. If the bids are very close, each company may be asked to submit a revised second bid, in which case it is to be expected that differences will be widened to such an extent that the lowest bid can be accepted. Once the contractor has been chosen, negotiations with the client can start. These usually take several months in the case of large contracts and it is not unknown for the negotiation period to run into years.

Global Tendering and Bid Evaluation

These are very significant to the project managers engaged in design, construction, execution, installation, operation and maintenance of large-scale assets in order to derive optimum benefits from the capital intensive projects. Global tenders are issued for high tech requirements particularly associated with international credits like world bank loans. Since the source of supply may be outside the country, a detailed plan must be done and global tender must involve simplicity in language and clarity, specifying tendering and accepting authority. It is necessary to ensure that the accepting and tendering parties must be specific to commit. Tendering is nothing but visualization of various events that have to take place in the execution of contract spread over two to three years, and legislating for the buyer's stand in respect of all these, which should be practical, consistent with canons of financial propriety and allow for proper legal actions.

The chief merit of global tendering is that it gives equal opportunity to every supplier / contractor to make an offer within the terms and conditions of tender and thus it promotes competition. Global tendering is particularly recommended to ensure safeguard against public procurement.

Bids must be procured from really interested parties by proper prequalification and applying the bid bond clause. The tender is awarded to the responsible bidder whose price is the lowest, provided it is deemed reasonable and most advantageous. The bidder has to satisfy himself that full information has been furnished as required in the specifications, as lack of information will be at the risk of rejection of bid. The bids received will be scrutinized by the project team according to the bid evaluation criteria to ascertain the most suitable evaluation of bid for the total project.

Formal advertising of tender is resorted to in the bidder's interest, there must be time for formal solicitation and for the delays that may frequently develop. While submitting application for pre-qualification, the bidders must furnish package number, description of work intended for pre-qualification and name and address of the bidder, address of registered office of the firm.

The bidder must also furnish the lists of technical personnel with their experience, names of sub contractors and the nature of job handled by them. The details of similar works executed in last ten years indicating name, address of clients, nature of job, contract value, completion times, etc., need to be furnished by the bidder. Information on current orders in hand, expected time of completion have also to be furnished by the bidder.

The bid application, complete in all respects in seven copies must be submitted to the project authorities so as to reach them within a specified date. One set of sealed copy of application must be sent under registered post to the Directorate General of Technical Development, Coordination Section, New Delhi. The following should be subscribed on the envelop: Package number … Description … Application for pre-bid qualification for plant modernization phase. The project authorities have the right to verify the credentials of the applicants and their facilities, etc., and call for additional information, if required, to ascertain the bidders' capabilities. The project authorities also reserve the absolute right to reject, at their discretion, the application of any or all bidders without assigning any reason.

Initial Evaluation

Once the bids are received, the project authorities evaluate them on a preliminary basis, with a checklist, as to whether all key points, including

commercial terms, costs, delivery schedules and other contractual aspects, have been fully covered.

In order to shortlist the vendors, the acceptable bidders are arranged in ascending price order, after eliminating bidders with unacceptable quotations, or with incomplete bids. The preliminary evaluation enables to focus greater attention on a few vendors with competitive bidding, the need (if any) solicit additional information.

Technical Evaluation

After initial scrutiny of the promising bidders' information a complete technical evaluation of the bids of the potential suppliers is performed by tabulating the data in a suitable way. It is desirable to specify for the shortlisted vendors the following checklists in program. Vendor, quotation reference, quotation date, validity expire date, vendors complete address, local representative, complete delivery material delivery point, basic price of material escalation terms, payment details, recommended spares, mandatory spares, shop assembly, shop painting, shop testing, packing, graphs, catalysts, lubricants, drawings, engineer services, warrantees, import duties, agents' fees, currency exchange etc., inspection fees, adjusted base cost, freight cost, operating cost, feed stockiest, utility cost, field service estimate, allowance for estimated extras, total estimated present cost also form a part of the checklist. It is necessary to scrutinize additional costs / savings and availability of vendor support at this phase.

Commercial Evaluation

The detailed commercial scrutiny is usually conducted after evaluating the bid technically. The commercial scrutiny consists of checking whether everything in the specification is covered in the price. These aspects include the following: drawings, documents, maintenance, operating manuals, test facilities, test certificates, painting and insulation, shop assembly, packing, crating, field service, freight to delivery payment, warranties, guarantees delivery date, unit rates, bases of escalation, discounted value of money, currency exchanges, imports costs and costs of additional services are verified. The conversion of quoted costs to present values applies to down payment, progress payment, final payment, operating costs, variable annual costs, escalation costs, field service costs and other cost components.

Pre-award Meetings

It helps the project authorities to meet the shortlisted vendors in pre-award conference prior to selection for reviewing any questions which have arisen during the technical and commercial evaluations and to confirm all aspects of the bid. It is desirable that a team of senior officers connected with the project meets, separately, the shortlisted vendors so that negotiations, if necessary, can take place smoothly and also to have discussions on ethical considerations.

Bid Conditioning

The conditioning process helps the project authorities, to consider intangible and other factors which might influence vendor selection. A low bid may not necessarily be the cheapest bid when the following aspects are considered: additional expediting, follow-up of stagewise inspection, more engineering follow-up, additional engineering review, delayed receipt of drawings, interchangeability of spares with existing equipments, local vendors, local pressures / support, future service availability, initial maintenance, compatibility with existing infrastructure, additional support facilities application of learning-curve for cost-reduction, transporting over dimensional consignments, etc.,

Vendor Selection

The vendor selection process is accomplished by the project committee. The technical aspects are reviewed by technical personnel, while the commercial aspects are evaluated by finance / commercial officers. A detailed presentation of the pros and cons of all aspects of the individual vendor is made, and a vendor is finally chosen.

Pre-commitment Meeting

The pre-commitment meeting with the vendor enables the suppliers to know that he is likely to get the contract. A formal agenda is made to cover a comprehensive review of specifications, contracts, and commercial terms in order to reduce misunderstanding between the two parties. A broad identity of views on all aspects in reached between the two parties. If the vendor has some lingering doubts, these are recorded in written statements.

Formal Award

The last step in the whole exercise is to formally award the contract to the vendor. A telex or telephone order is initially placed. A formal written purchase order, together with necessary documents, data sheets, specifications, contractual terms, etc., is handed over to the vendor. After choosing the vendor, the next stage of follow up of the contract's implementation on manufacture, transport, installation is planned, so that efforts are made to commission the project in time.

Steps required for bid preparation are given below:

A. Pre-bid invitation stage

1. Define as precisely as possible the need that is to be met.
2. Identify the product that will meet this need.
3. Specify operating and other relevant parameters
4. Lay down specifications, as required, by reference to:
   a. Standards
      i) national;
      ii) international;
      iii) other country's;
      iv) industrial association

   b. Brand names
   c. Catalogues of sellers
   d. Drawings, engineering designs
   e. Samples

5. Specify test methods and procedures
6. Research supply market to know the structural characteristics of the international market for the product.
7. Decide on procurement method and strategy.
8. Identify potential suppliers, through desk research.
9. Shortlist the more reliable ones through a pre-qualification system.

10. Prepare bid documentation and the invitation to tender. Define contract terms and conditions and scope and nature of guarantees required. Check for precision and completeness.
11. Establish evaluation criteria.

C. At bid-evaluation stage

1. Design a suitable format for bid tabulation.
2. Reduce all variables in different bids to a comparable basis, e.g. either all FOB or CFR terms.
3. Express all prices / costs in a single currency and use an appropriate exchange rate for the purpose.
4. As the ultimate cost to the buyer is more important than the price, compare the relative cost of supplies from different bidders and not only their price quotations.
5. For equipment, be assured by the supplier of the later availability of spares / replacements and their supply price.
6. As operating costs are as important an element of evaluation as the initial cost of the equipment, adopt a total-costing / life-cycle costing technique when evaluating bids for equipment.
7. As the time profiles of the costs and possible output (and hence, revenues) of different bids for equipment are likely to differ, use the net present value technique and take into account the serviceable life, salvate value at the end, and operating costs.
8. Follow these two objectives for the technical evaluation:
    a. Assess deviations from prescribed specifications and, if these are acceptable, make appropriate adjustments to the price for positive and negative deviations to compare offers.
    b. For commercial evaluation, reduce the payment terms of different offers for productivity differentials (use of material and / or human inputs per unit of output).

9. For commercial evaluation, reduce the payment terms of different offers to a comparable basis. In the case of deferred payments, make use of the net present value analysis technique.

Annexure

Checklist of important points in Bid Evaluation

A. Pre-bid invitation stage

1. Define as precisely as possible the need that, is to be met.
2. Identify the product that whl meet this need.
3. Specify operating and other relevant parameters.
4. Lay down specifications, as required, by reference to:

   a. Standards:
   (i) national;
   (ii) International;
   (iii) other country's;
   (iv) Industrial associations.

   b. Brand names
   c. Catalogues of sellers
   d. Drawings, engineering designs
   e. Samples

5. Lay down specifications, as required, by reference to:
6. Research supply market to know the structural characteristics of the International market for the product.
7. Decide on procurement method and strategy.
8. Identify potential suppliers, through desk research.
9. Shortlist the more reliable ones through a pre-qualification system or otherwise.
10. Prepare bid documentation and the Invitation to tender. Define contract terms and conditions and scope and nature of guarantees required. Check for precision and completeness.
11. Establish evaluation criteria.

B. On receipt or opening of bids

1. Examine for compliance with instructions.
   a. Timelines of submission
   b. Completeness of documentation, (e.g. bid bond and guarantees)
   c. Authorised Signature on bids.

C. At bid-evaluation stage

1. Design a suitable format for bid tabulation.
2. Reduce all variables in different bids to a comparable basis, e.g. either all FOB or CFR terms.
3. Express all prices / costs in a single currency and use an appropriate exchange rate for the purpose.
4. As the ultimate cost to the buyer is more important than the price, compare the relative cost of supplies from different bidders and not only their p Ice quotations.
5. For equipment, be assured by the supplier of the later availability of spares/ replacements and their supply price.
6. As operating costs are as important an element of evaluation as the initial cost of the equipment, adopt a total-costing/life-cycle costing technique when evaluating bids for equipment.
7. As the time profiles of the costs and possible output (and hance, revenues) of different bids for equipment are likely to differ, use the net present value technique and take into account the serviceable life, salvage value at the end, and operating costs.
8. Follow these two objectives for the technical evaluation:
   a. Assess deviations from prescribed specifications and, If these are acceptable, make appropriate adjustments to the price for positive and negative deviations to compare offers.

b. Appraise the differences in process / engineering technologies of the different offers for productivity differentials (use of material and/or human inputs per unit of output).

9., For commercial evaluation, reduce the payment terms of different offers to a comparable bases. In the case of deferred payments, make use of the net present value analysis technique.

Delivery Terms of Contracts

There are five main types of contracts that are currently used by process plant contractors. In order of decreasing degrees of the fixed price element, these are as follows:

- Lump sum (fixed price) contracts
- Guaranteed maximum contracts
- Target price contracts
- Cost-plus-fixed fee contracts
- Cost-plus-percentage fee contracts

The less experienced clients tend to prefer the lump sum type of contract as this results in the greatest competition between contractors and the evaluation of bids is easy. Contractors' bidding costs for this type of contract are at their highest and there are disadvantages. Not only is the bid time quite long, but such bids are highly inflexible, with any changes being difficult and expensive. Costs may be high to cover any contingencies and risks, and the client-contractor relationship tends to be more divergent than with other types of contract. Finally, the emphasis on the low bid may give an unsatisfactory end product.

Fixed price contracts are used manly where the client is in a position to specify exactly what is to be built and where much of the engineering work must be carried out prior to signing of the contract. Other types of contracts may be converted to a fixed price contract when the work is sufficiently advanced to permit an accurate, maximum cost estimate to be made.

Typical payment terms for engineering work are an initial down payment made on contract signature, several instalments paid at intervals during plant

construction, and a final payment due after satisfactory completion and the expiry of any performance guarantee period. In some cases, periodic instalment payments may continue over several years after plant completion. Instalments may fall due upon contract signature, during deliveries of equipment and plant construction, after completion of acceptance costs, or at set time intervals.

Great care must be taken over the wording of payment terms since loosely worded provisions can result in substantial financial losses to the contactor, particularly if instalment payments are determined by the dates of tests and the commissioning of units. Whenever possible, fixed dates should be written into the agreement for individual instalment payments to avoid excuses for postponement being made by the client, some of which may be trifling in nature. To minimize such risks, the contract should also clearly specify the exact documents and certificates required before a payment can be authorized.

Negotiation

Investments in projects involve huge capital outlay. Hence the project manager, in collaboration with the finance and purchase departments, deliberates with the equipment suppliers on quality, delivery schedule, price, payment schedule, service and other relevant legal contractual aspects. This process of deliberation is known as negotiations.

The term negotiation, is derived from Latin civil laws and refers to tradings and deliberations, leading to the purchase of equipments and services. Negotiation is essentially a communication process between the parties incidental to the making of a contract, or a business transaction.

The Oxford dictionary defines negotiation as a conference with another with a view to compromising on an agreement. Negotiation is the art of arriving at a common understanding with a manufacturer on the essentials of a contract in the area of project management. Thus, negotiation attempts to find a formula which will give each party the most profitable value in a specific situation, and is not only a science but an art as well.

Many organizations consider that the main objective of negotiations in project management is to establish a fair and reasonable price and to develop a sound relationship with the suppliers. Besides dealing with the immediate transaction, the buyer must consider his future relations with the supplier. The

buyer in addition to being fair, should always conduct himself so that in future negotiations, the supplier will submit his lowest price and perform the contract on schedule.

Negotiation is not to be confused with haggling over price. It is reasonable discussion as regards price, cost, specification, justification for conditions and delivery, control, price-revision, discounts, escalation, provision etc. The purpose of negotiation is to find a common ground on which, both buyer and seller agree, and arrive at a compromise acceptable to both.

Parameters of Negotiation

There are a large number of aspects that my crop up in the negotiation process. Some of the important areas in which the buyer and the seller may concentrate are mentioned below. These are price, cost, terms and conditions of the original contract; variations in quantity; specifications and deviation from specified tolerances; basis for price revision or escalation; facilities to be provided by the project authorities; quality of subcontracted items; unforeseen amount of construction maintenance repairs; continued supply of spares; buyback arrangements of initially dumped unwanted spares; supply of critical drawings; performance guarantee after initial warrantee is over; after sales service; technology upgradation after initial supply of equipments on a continuous basis; interpretation of legal terms; basis for penalty /bonus; payment schedule; moral/ethical aspects; dispatch terms; instructions on insurance; removal of rejected items; and risk purchase clause in the event of changes in delivery schedule.

Tools of Negotiation

The SWOT approach –strength, weakness, opportunity, and threats – relevant to the project team, suppliers corporate profile, the industry scenario, national perspectives, international consideration, etc., will enable identification of the bargaining position of the supplier in the context of social / political / technological / financial / regulatory / economical / natural environmental factors. Negotiations must be conducted in peaceful and comfortable surroundings without disturbance of any sort.

It is essential that the negotiating team must be familiar with the market situation, and possess thorough knowledge about the suppliers' expertise on technical, financial and manpower capabilities. It is not necessary to negotiate on each and every item/supplier. It is not necessary to negotiate on each and every item/supplier. It is desirable to negotiate only with the lowest two or three tenders. The process of negotiation must be confined to high cost critical items. Techniques like ABC/VED/MUSIC-3D analysis may be helpful.

Quantity discount analysis is used for simple comparisons while detailed analysis of cost breakdown into labour, material, overhead etc., are used for complex comparisons. The break-even analysis is also used for estimating the internal price structure and to obtain greater insight into the suppliers proposals.

The concept of learning curve of the labour cost going down with repetitive jobs may be used for repetitive labour intensive projects. Other techniques include persuasion, questioning, discussions, vertical thinking, prolonged silence, walk out etc., depending on the situations.

The important personal abilities and qualification for negotiation are: (1) knowledge, (2) attitude, (3) skill in identifying the issues under negotiation and (4) planning strategies and techniques to revolve these issues effectively by argument, persuation and skills in communication.

Conclusion

This chapter narrates the significance of contracting, and its dimensions in implementing a project. The project manager cannot get everything done through an in-house staff. He has to make necessary arrangements for acquiring authority over external organizations which will be required to participate in the execution of a project against some consideration. Thus this chapter has emphasized the contractual arrangement is a basic requirement in project management and hence the basics of contracting, contracting principles, tendering and bid evaluation, and also the delivery terms of contracting must be learnt by all concerned.

Self Assessment Questions

1. Briefly describe the 3 R's of contracting.
2. What is global tendering? Explain how it can be processed.
3. What is bidding and explain the bid evaluation process?
4. What is project negotiation? Explain its objectives.
5. Explain the parameters of effective negotiation.
6. Briefly narrate the tools of negotiation.
7. Explain the different types of pricing contracts.
8. What are the contents of tender documents?

UNIT – III

COMPILATION OF CONTRACTS

Contracting ensures legality for the project endeavor. Hence the project promoter has to compile the contracting process in a proper manner by clearly defining authority, responsibility relationship among the parties to the contract. This requires establishing good communication system, negotiation process and adoption of various international contracting terms. A brief description about these aspects are given below.

Need for Communication

It is advisable to ensure that the project requirement, having been fully expressed within the company, is communicated to the supplier without any lack of understanding between the parties concerned. If necessary, consultations between the persons involved shall take place to facilitate its translation while maintaining equivalence, or to complete the necessary conversions while giving a clear indication of the bases of these conversions. Such differences in expression may originate in practice, customs, or habits inherent to the following:

- Countries: languages spoken, units of measurement, etc.
- Sectors of industry and / or technology – language, units of measurement, technical specifications, codes of practice, etc..
- Companies: languages, history corporate culture, managerial styles, and
- Personnel: function, culture, skill-mix, technical competence, etc..

Hence the need for standard contracts.

Contents of Contract

The main points in the contents of the contract need careful attention of project manager. These are listed as under:

- Date, name/address of parties, telex/fax details.
- Document number and document pagination.
- Subject of the agreement: type, group, model, scope, classification or other precise identification, references to any tenders, references to any former undertaking, references to samples, internal coding, supplier's references, technical specifications, drawings, design, technical assistance, and
- Deadlines for the different stages of fulfillment of the agreement supply of consignments, inspection at works, shipment, dispatch, delivery documents and instructions for operations.

Financial Aspects

These include:

- Price, taking into account price per piece
- Financial settlements as form, terms, conditions, financial organizations, instalments, advances, considerations, payment schedules, security to contract performance, retention money, etc.
- Confidentiality clauses and secrecy of information, non-collaboration with competitors in a stipulated period.
- Location, and possible changes to the location, of project site, manufacture, assembly, inspection of consignments, dispatch, transit, delivery, or operation.
- Provision of documents on legal, customs, financial, or technical specifications, plan and design documents, inspection instructions and other technical data with titles, numbers, drawings, supplements or any other formal identification, and control documents.
- Packaging material, presentation, technical conditions, lost packaging, returnable packaging, palletizing plan, or returnable pallets.
- Acceptance criteria, such as provision for a trial period, permanent, installation, commissioning with quantitative inspections, qualitative inspections, standards, inspection testing, destructive or non-

destructive, responsibility on supplier/client/third party-reference standards, test measurements, certificates of conformity. proofs and incidental services.

- Transport facilities, carriers, forwarding agents, handling by using Inco terms, International Chamber of Commerce. Paris. post. freight and demurrage.
- Customs, terms of customs operations, customs offices concerned. and forwarding and clearing agents.
- Addresses for delivery at project site, invoicing. forwarding of documents, return of documents, communications on award of contracts, letter of intent.
- Acknowledgement and / or confirmation or agreement and, more generally, the method of circulating agreements for the responsibility of the contracts.
- Guarantees of facilities, results, performance. technical adaptation, hidden defects, or fixed period guarantee, for the safety of plant.
- Conformity wit the standards and with the legislation in force in the countries of destination or transit, with titles. numbers and editions of relevant documents.
- Property and risks: transfer of property. transfer of risks. property reservations, sublicence, intellectual property rights. patents' infringement, and buyback clauses.
- Access to premises, internal security regulations. subcontracting. training, technical assistance, erection and commissioning.
- Insurance during transit, erection, fire accidents and 'consequential loss.
- penalties or reductions for reasons of timing. results. bonus. guarantees, liquidated damages, and force majeure clause events excusing performance.
- Preventive and corrective maintenance, taking into consideration possible spare parts necessary for maintenance and supplies of mandatory and long term requirements.

- Cancellation of agreement, annulment of sale, conditions for refund of money already paid.
- Special contracting conditions, with reference to the law on jurisprudence.
- Appointment of consultants, arbitration experts and jurisdiction of courts, and
- Signatures, delegation of representation and/or commitment from the company necessary for inspection of the validity of document being dispatched.

Both the parties shall examine and approve the contracting documents before circulating them, in order to comply with the specified requirements. The important conditions peculiar to the project contract are expanded hereunder.

Terminology of Contracts

The Project Managers must understand the terminology used in the contract law.

The terms of the contract must be precise and definite, and there must be no room for ambiguity. The project manager may hold the contractors responsible for any lapse or default, but he has the ultimate responsibility to the owners. The terms used in a contract are as under:

Agent: An agent is a person who represents a company (or an individual), and acts on its behalf in certain business transactions. This is the most important term in contrats, relating to project management.

Principal: The Principal is one who utilizes the services of an agent to conduct business.

Power of Attorney

Project managers may have general power of attorney, or a power limited only to the requirements of the project for which they have the responsibility.

Whatever the situation, it is important to specify in a construction contract the legal authority the project manager and the construction manager have.

Contractors should take special care to ensure that, during the execution of a project, 'change' order are approved by a company agent with the power of attorney.

Assignment

An assignment of contract rights is the transfer of all, or part of the rights of a contract by one party to a third party. There is no particular form required to affect an assignment, and it may be made with or without consideration. Most contract rights are assignable without the consent of the promisor unless expressly prohibited by the terms of the contract. The assignment of a contract may not relieve the assignor of responsibility under the contract without agreement by the original contracting parties.

LD/Penalty/Bonus

Liquidated damages is an important feature in contracts When time is a major factor in the execution of a contract, it is implied that completion by a certain date is a part of the consideration for the contract. and failure to meet the requirement leaves the offending party liable to the other party for damages. Since such damages may be extremely difficult to determine exactly. the usual practice is to specify a definite amount per day as liquidated damages in lieu of actual damage; suffered. Agreed to by both parties, this amount is enforceable by law, and must be justified by the damaged party. The onus of proof rests with the defaulting contractor. The amount must be reasonable as unjustifiable damages constitute a penalty, and the courts will not assess a penalty unless there is a corresponding bonus for a performance better than that specified in the contract.

Termination

Ordinarily a contract is terminated when both parties have performed their obligations under the agreement. The contract is said to have been

executed. Specific performance is accomplished when the work is completed exactly to specifications within the specified time limit, and the contracting party makes the payment in full. Substantial performance is accomplished when, due to conditions beyond the control of either party, specific performance is impossible, but the contracted party has substantially completed its obligations under the contract and is entitled to receive payment in full, or with only minor deduction.

Force Majeure

Force Majeure refers to the fact that an act of God, or overwhelming force, such as war, revolution, and change in Government may have effect upon a contract and prevent its performance. The effect of impossibility or illegality or performance in this sense is to discharge further performance.

Litigation about contracts is concerned with torts. A tort is a civil wrong which, in violating the private personal rights of an individual, inflicts damage or injury to his property or person. It may be an act or a failure to act. A tort is distinguished from a crime in that it is an offense against an individual rather than against the state, and the injured party must seek redress. Every tort consists of a breach of duty and a direct resulting damage. Without both it is not a tort.

Arbitration

Arbitration; as a means of settling disputes, is popular in project management. In execution of projects, there is likely to be conflict between project authorities and the contractors with regard to price escalation, quality, delivery, service, etc. Hence the need to resolve the disputes by voluntary agreements by the award of an impartial arbitrator agreed upon by both parties. The arbitrator settles the disputes on the basis of the power derived from the contracts. Usually three arbitrators – one each nominated by the project authority and the contractor and an independent person are involved.

PRACTICAL ASPECTS OF CONTRACT

Contract Practices

The entire project works going on under various departments of the government-Central and State, besides public sector companies-are initiated through 'Notice Inviting Tender'.

The tender call has to culminate in a contract after a short interval of time. This time may get elongated for various reasons, like outside interference, complicated nature of the work, poor preparation of the tender document, too many decision levels besides prolonged discussions, never-ending queries and a spate of clarifications.

Oxford defines the word contract thus, 'Business agreement for supply of goods or performance of work at fixed price'. It may be suggested that the word 'or' should be deleted, as also the phrase 'at fixed price'. Because just 'supply' of goods is referred to as 'purchase order', and execution of work through chosen parties comes under 'work order'.

Time/Quality/Safety

Time is the essence of a contract. Quite true, the project is a time-bound one. That is why a penalty for delayed execution is incorporated in the form of a liquidated damage for compensating the loss of revenue to the organisation by late commissioning.

The organisatioin would definitely like to involve the contractor in any mishap at the site. But how can this objective be included effectively in an agreement? perhaps, to ensure safety, engaging a qualified and competent supervisory team of personnel may be insisted upon, apart from first mentioning the safety measures as obligatory. Going deeper into the subject, should documentary evidence be asked for as a matter of routine for making the payment?

INCO Terms

International Chamber of Commerce terms of defining their respective responsibilities simply and safely, they eliminate and possibility of misunderstanding and subsequent dispute.

Purpose of INCO Terms

The purpose of 'Inco terms' is to provide a set of international rules for the interpretation of the chief terms used in foreign trade contracts for the optional use of businessmen who prefer the certainty of uniform international rules to the uncertainties of the varied interpretations of the same term in different countries.

Frequently parties to a contract are unaware of the differences of trading practice in their respective countries. The existing diversity of interpretation is a constant source of friction in international trade, leading to misunderstandings, disputes and references to the courts with all the waste of time and money that these entail.

The difficulties met with by importers and exporters are as follows. First, uncertainty as to the law of what country will be applicable to their contracts; second, difficulties, arising from inadequate information and, third, difficulties arising from diversity in interpretation.

The Twelve INCO Terms

- **Ex-works** means that the seller's only responsibility is to make the goods available at his premises (i.e., works or factory). The buyer bears the full cost and risk involved in bringing the goods from there to the destination. This term thus represents the minimum obligation for the seller.
- **FOR** (Free on Rail) and FOT (Free on Truck) literally means 'Free on Rail' and 'Free on Truck'. These terms are intended to be used when the goods are to be sent by rail, but they are also used for road transport; Inco terms do not distinguish between FOR and FOT.
- **FAS** (Free Alongside Ship), literally means 'Free Alongside Ship' under this term the seller's obligations are fulfilled when the good shave been placed alongside the ship. This means that the buyer has to bear all costs and risk of loss or damage to the goods from the moment.
- **FOB** means 'Free on Board'. The goods are placed on board by the seller free of cost to the buyer on a ship at a port of shipment named in the sales contract.

- **C&F or CFR** means 'Cost and Freight'. The word 'cost' only signifies the price for the goods themselves and is, in a sense, superfluous. The important keyword is freight.
- **CIF** is perhaps the most usual and important term used in sales contracts involving carriage by sea, it literally means 'cost, insurance and freight'. This term is basically the same as C&F, but with the addition that the seller has to procure insurance against the risk of loss of damage to the goods during the carriage.
- **DCP**, Freight or Carriage Paid to, is used for inland transport only, including national and international transport by road, rail and inland waterways.
- **'Ex-ship'** means that the seller shall make the goods available to the buyer in the ship at the destination named in sales contract.
- **Ex-Quay** means that the seller makes the goods available to the buyer on quay (wharf) at the destination named in the sales contract.
- **DAF,** Delivered at Frontier, means that the seller's obligation are fulfilled when the goods have arrived at the frontier but before the customs border of the country named in the sales contract, Delivered duty paid when followed by words naming the buyer's premises denotes the seller's maximum obligation.
- **FAD** Airport is based on the same main principle as the ordinary FOB term. The seller fulfills his obligations by delivering the goods to the air carrier at the airport of departure.

When the project is executed through contracts, completion of project will depend upon the completion of contracts.

There are following stages in completion of contract:

Preliminary Acceptance

On completion of erection works for structures, refractories, equipments both mechanical and electrical, contractor applies for conducting preliminary acceptance tests. The agencies associated with the preliminary acceptance tests are:

- Projects
- Operation
- Consultants
- Contractor

Thus, with the joint efforts, cold tests are organised. Cold tests shall be performed on the individual sub-assemblies of the unit and the unit as a whole and shall be designed to conduct the systematic check of the components and of the functional operation thereof.

Cold tests shall comprise idle, no-load and underload tests. Cold tests shall be conducted by the contractor under his sole responsibility and employing his own personnel. The purchaser's supervisory personnel and skilled operating personnel shall however be present during the cold test.

While conducting preliminary acceptance tests, project, in association with operation, consultant, will also check that the contractor has made/submitted:

(i) All supplies agreed in the contract and equipment is fit to be started up and commissioned.

(ii) Relevant drawings necessary for initial hot trials and commissioning.

(iii) Documents such as operation manuals, maintenance manuals, etc.

Construction (project) department in association with operation and consultants prepares check lists for conducting preliminary acceptance tests. Representatives from contractor, consultant, project engineering department and construction zones will conduct joint inspection of the equipment. All discrepancies observed either of incomplete work or defective work, will be clearly indicated in the joint inspection report.

On liquidation of all discrepancies as indicated in joint inspection report, contractor will offer equipment for preliminary acceptance tests. On retesting, if nothing is observed as incomplete or defective, which may affect the normal operation of the plant, PAC (preliminary acceptance certificate) will be issued

immediately or within a specified period, say within 30 days from the date of retesting.

Successful Commissioning

Within a specified period, say 30 days from the date of issue of preliminary acceptance certificate, the contractor shall start up and successfully commission the unit in an integrated manner under his sole responsibility.

Commissioning of the unit shall be deemed to be successfully done when:

(i) Unit is ready to commence regular production or service, and

(ii) Unit is able to produce as per specifications and quality in the contract.

(iii) Raw material, energies and utilities are consumed as per contracted rates, and

(iv) The plant/unit has attained a level of output not below say two-third or 70% of the contracted rated capacity over a reasonable period of time as agreed.

Takeover

The unit shall be taken over by the purchaser when commissioning certificate has been used and

(i) Contractor has submitted all final drawings and documents as per contract.

(ii) Contractor has supplied the spares for operation and maintenance.

(iii) Contractor has liquidated all the objections/observations contained in the preliminary acceptance certificate.

Taking over shall mean taking over physical possession of the unit / plant and will in no way relieve the contractor of his obligations under the contract.

Performance Guarantee Test

Immediately after successful commissioning of the plant / unit in terms of rate of production and quality but not later than a specified period say three

months from the date of successful commissioning, the contractor will offer the plant / unit for conducting performance guarantee test. Project department / consultant jointly with contractor will prepare the procedure to be followed in carrying out performance guarantee tests indicating the period of tests. Operation /project dept/consultant/construction zone will participate in the performance guarantee tests. On achieving rate of production, consumption norms and quality parameters and agreed in the contract, performance guarantee test will be deemed to be successfully completed. If the guarantee values are not achieved, the contractor shall indicate when the second test should be carried out and it should be done in the same manner as the first test.

If, even after two successive tests, the performance values are not achieved, the contractor shall undertake at his own cost such modifications or replacements as are considered necessary to achieve the performance guarantee values as stipulated in the contract and the responsibility to demonstrate guaranteed performance values shall continue to remain with the contract.

If, within say one year from successful commissioning, in spite of attempts for modification / rectification, one or more of the essential performance values as per contract are not achieved, then liquidated damages up to a maximum of say 7.5% of the total contract price as adjusted by price variation shall become payable. This percentage may vary in different organizations.

Final Acceptance Certificate

Final Acceptance Certificate shall be issued by the purchaser within a specified period say 90 days from the latest date when:

(i) Performance guarantee tests in respect of sub-units as well as the unit as a whole have been carried out and performance guarantee values achieved as per the contract.

(ii) Performance of the unit has been established as integrated with the material handling system, electric power system, inter-plant fluid system and auxiliaries serving the unit as well as proceeding and succeeding plant units under the control of contractor are under normal operation.

(iii) All other supplies and services have been completed as per the contract.

(iv) Supply of spares has been completed.

(v) Final documentation incorporating latest modifications as built has been submitted by the contractor in requisite copies.

(vi) The contractor has rectified in a definitive manner all defects / deficiencies mentioned in the commissioning certificate.

(vii) The contractor has fulfilled all other obligations as per the contract.

However, it may be ensured that the bank guarantee for security deposit is released on expiry of guarantee / warranty period, discharge of all obligations under the contract and production of a "No Demand Certificate" by the contractor.

Declaration of Completion by Project Department

Project shall be declared as completed when the project has been successfully commissioned. 'Completion time' shall mean the period stated in the contract for the completion of works upto and including successful commissioning and shall be calculated from the effective date of the contract.

When the project has been completed in terms of the contract provisions, Project department will declare the completion and will handover the plant and equipment to operation department.

For major projects, a proper "handing over and taking over" document is executed duly signed by both project and operation departments at the time of handing over of project to operation department.

Closure of Contracts

When the project is completed and contractor has fulfilled all his obligations including defects liability period, the next stage in the project life cycle is to close the contract. By closure it is meant financial closure of the contract. Various stages of completion of contract has been described in the previous chapter. There are two types of closure of contract: physical closure and financial closure. By 'Physical closure' it is meant completion of work in

the contract as per the constractual milestones, whereas 'financial closure' means total closure i.e., end of the contractor's liabilities. Once, financial closure of the contract is done, contractor becomes free from the contractual obligations.

Need for Closure of Contract

(i) To work out the completion cost of the project

(ii) To know the amount recoverable from the contractor account of:

   (a) Free issues

   (b) Issues on cost recovery basis

   (c) Recovery of liquidated damages.

   (d) Recover on account of non-achievement of performance guarantee parameters.

   (e) Any other recoveries, such as hire charges of equipment, electricity charges etc.,

(iii) To finalise the material accounts for materials issued to the contractor on cost recovery basis or on free issue basis.

(iv) Finally to close the financial liability in the contract and make the final payment to the contractor.

Activities involved in the closure of contract

(i) Identification of supplies and services yet to be completed by the contractor and ensuring completion of the same.

(ii) To check whether all the spares as provided in the contract have been supplied.

(iii) To check whether contractor has fulfilled all his obligations as per the contract and ensure compliance in respect of outstanding obligations.

(iv) Issue of certificates

a. Preliminary Acceptance Certificate

b. Commissioning Certificate

c. Performance Guarantee Test Certificate

d. Final Acceptance Certificate

(v) Settlement of claims of the contractor

(a) For the extra items or additional work over and above the scope of work of the contract.

(b) Escalations based on the price variation clause (PVC) in the contract.

(c) Statutory variations for –

- Excise Duty
- Sales Tax
- Commercial Tax
- Entry Tax
- Customs Duty
- Exchange Rate Variation

(vi) Approval of final deviation and extra items statement by the competent authority.

(vii) Delay analysis for delay in completion of work if any and fixing the responsibility for delay due to contractor or due to purchaser.

(viii) Settlement of recovery of liquidated damages or payment of bonus for early successful completion.

(ix) Submission of materials account for

- free issues
- issues on cost recovery basis

Materials may be steel, cement, equipment, structures, refractories, cables, pipes, etc.

(x) To finalise recoveries on account of hire charges / state dues / electricity charges, demurrage, port rent and other charges, if any.

(xi) Extension of validity of insurance policy, bank guarantee for security deposit and performance guarantee, etc.

(xii) Constitution of standing committee for finalization of closure of contracts.

(xiii) To organize the meetings of the standing committee members.

(xiv) Finalisation of claims of the contractors and other issues like recovery of LD, deduction for penalty for non-performance of guarantee parameter and any other issue by the committee.

(xv) Processing of recommendation of the standing closure committee for the approval of competent authority.

Self Assessment Questions

1. What are the content of good contract?
2. Explain the need for communication in contracting process.
3. What are all Inco Terms? Explain them briefly.
4. Discuss few important contracting terminologies.
5. What is arbitration? Explain the situation and process of arbitration.
6. What is Force Majeure? Explain this clause of contract with an example.

UNIT – IV

LEGAL ASPECTS OF PROJECT MANAGEMENT

The project manager, who spends crores of rupees, as the representative of his company, in signing the contracts has necessarily to be concerned with the legal aspects of his job. It is indeed a tribute to the honesty of the vast majority of the project team and the companies that thousands of crores worth of project transactions are completed to everyones' satisfaction without recourse to legal procedures. Project buying creates a peculiar legal relationship between the project authorities and the seller which has legal implications.

Most companies attempt to satisfy the legal requirements of contract by printing a series of conditions on the reverse side of the purchase orders, and seek the assistance of legal department more often. Obviously the project team cannot send every contract to the legal department for an approval. Hence, it is for the project tem to have a fundamental understanding of the legal statutes which regulate their work.

The project team is expected to be conversant with the following basic provisions, or select legal aspects, of the contract.

The Indian Contract Act, including the Law of Agency

The Sale of Gods Act; The Insurance Laws;

The Insolvency Act; The Negotiable Instruments Act; The Laws Relating to Transport; The Laws Relating to Excise Duty, Sales and Entry Tax; Import and export Regulations, Including Foreign Exchange Regulations; Local Tax Laws such as Sales Tax, Octroi, etc; Law Relating to Insurance; Indian Mercantile Law, Major Port Trust Act; Legal Aspects of Transfer of Title of Lands; Laws Relating to Land Acquisition and land Disputes; Labour Legislation; Environmental Pollution Control Legislation, Land Ceiling Acts, Company Law; Laws Relating to Project Finance, Customs Act; Bills of Exchange and Indian Railway Act.

Agency and Power of Attorney

Concept of Agency Law is important for the Project Manager in the performance of his duties, as he acts as an agent of the principals and is

responsible to the board of Directors of the company for which he is acting. Whatever a person who is competent to contract can do himself, may be got done through an agent, or conversely, no agent can do what his principal cannot. He who acts through an agent is deemed to be acting himself, i.e., the act of agent is an act of principal.

Sale of Goods Act

Sale is defined by the Indian Sale of Goods Act as a contract of sale of goods whereby the seller transfers, or agrees to transfer, the property in goods to the buyer for a price. Thus, sale is a bilateral contract with money consideration being a must for the sale of goods. Goods means every kind of movable property, other than actionable claims and money. Goods includes stock, machinery, crops, and things which are agreed to be served before sale or under the contract of sale. A contract of sale is made by an offer to buy or sell goods for a price.

Central Sales Tax

Sales tax represents an indirect tax in the sense that is 'impact' falls upon the registered dealer selling the goods, while the tax incidence has to be borne by the ultimate consumer. According to the constitution of India, 'Sales Tax' is a subject falling within the jurisdiction of the State and not the Central Government. Hence, it is a domain exclusively reserved for States. However, the constitution prohibits imposition of tax on a sale or purchase of goods taking place outside the state, or sale/purchase taking place in the course of import/export by the State Government.

Transfer of Title

Section 27 of the Indian Sale of Goods At lays down the principle of transfer of title. It emphasizes that the person who takes in good faith and for value without notice must get a good title.

Negotiable Instruments

'Negotiable' implies transferable, and 'instrument' means a written document by which a right is created. Usually, the negotiable instrument denotes a written document which entitles the bearer to a certain sum of money on a particular date. In India, this implies a promisory note, bill of exchange, or cheques payable. Transfer of property means that the new holder gets a right to

possess the instrument to recover the amount mentioned in the instrument on the due date.

Bailment

Bailment is the delivery of goods by one person to another for some purpose-say safe custody, transportation etc. The person to whom the goods belong is the bailer, and the party who accepts the goods, such as transport carriers, is the bailee.

Indemnity

The Contract of Indemnity is defined as a contract between the promisor called the 'Indemnified', whereby the former undertakes the responsibility of compensating any loss that the latter may suffer due to his own conduct or due to conduct of some one else. It is essentially a contingent contract, since its performance depends upon the happening or not happening of an event. The insurance arrangements represents contract of indemnity in which the insurer indemnifies the insured against monetary loss arising out of certain events notified in the insurance policy. The two parties are indemnifier and indemnified.

Excise Duty

Central Excise is another indirect tax, like sales tax, which is imposed by the central government. Normally, the project purchase is not directly concerned with excise formalities. But the project stores has to satisfy that the excise gate pass, issued by the vendor, will accompany any excisable goods he purchases. This precaution is necessary because the purchased materials can be impounded while in transit, if the authorities suspect non-payment of duty. Naturally, this will increase the lead time and hence the precaution.

Octroi Formalities

Octroi denotes a tax collected on articles brought for local consumption into the limits of a local authority for consumption, use or sale therein. The duty is levied by municipal and local authorities on goods unloaded in their areas of jurisdiction.

Letter of Credit

The Banks can open a letter of credit against an import licence or against an open general licence only on behalf of customers having an account with them. An L/C can be opened only in favour of the supplier abroad, and not in favour of the applicant i.e., the importer or his nominee.

Carriage of Goods

In the commercial life of the modern world, the contract entered into between parties for transportation of goods from the point of dispatch to the point of destination plays an important part. This is termed a contract for the carriage of goods, and the persons or companies, who undertake this work and contractual responsibility of carriage of goods by land, sea or air, are known as carriers.

Common Private Carrier

The Carriers Act 185 defines a common carrier as any individual, firm or company other than the Government, who or which, transport goods, as business 'over land or inland waterways' without discrimination, between different consignors. Thus, any person who offers for hire, as a regular business for money, to carry from one place to another the goods of any person who chooses to employ him for the purpose, is called a common carrier.

A person or company who carries the goods for selected parties and not for all clients is a private carrier. The private carrier does not make a general offer, but restricts his clientele to particular parties, with whom he negotiates special terms.

Self Assessment Questions

1. Explain the need for knowledge of legalities in project contracting.
2. What do you mean by Power of Attorney? and How to obtain it?
3. Explain the major provisions of contract of carriage of goods.
4. Define the terms 'Contract of Sale' and 'Agreement to Sale'
5. Explain the duties and rights of an agent.
6. Discuss the major provisions of law of agency.

UNIT – V

INSURANCE FOR PROJECTS

Need for Insurance

It is well-known that all business involves risk. We are all aware that the element of risk is inherent in all aspects of industrial scene, including project management. Human life and equipments are constantly exposed to loss or damage due to operation of fortuitous circumstances. Hence, they need protection against the adverse consequences of risks.

Risks are of two types –speculative or commercial risks such as change of technology, political upheaval etc; and pure or extraneous risks such as damage caused due to fire, or earthquake, or human risks such as burglary, theft, negligence, etc. Only the later risks are insurable. The object of insurance is to safeguard the business from a risk which may affect its solvency. Insurance transfers at a predetermined fixed cost, the uncertainties of time and quantum of loss arising out of an insurable risk. The project manager has to acquaint himself with the insurance aspects, eventhough, the finance department handles insurance converges. We shall briefly discuss some of the important risks and insurance policies relevant to the project management.

Fire and Natural Calamities Insurance

The policy provides cover in respect of all equipments-both movable and immovable-against the risks of fire, lightning, explosion of boiler and explosion of gas. Additional covers can be obtained in conjunction with fire insurance for the following:

(a) Riot fire damage,

(b) Riot and strike damages,

(c) Malicious damage,

(d) Explosion or implosion,

(e) Earthquake, fire and shock,

(f) Storm and tempest,

(g) Flood and inundation, and

(h) Spontaneous combustion.

The consequential loss fire insurance is designed to afford an insured protection, or financial reimbursement, against loss of gross profit from interruption of project commissioning as a result of damages of equipments by fire. This policy covers the loss of earning sustained in consequences of a business interruption, which, but for the damages by fire, would not have been there. The delay in project commissioning arising out of damages of equipments by fire is likely to result in reduction in output and increase of cost of working. Insurance cover under a consequential loss fire policy is obtained.

Erection All Risks (EAR) Insurance

An erection all risks (EAR) insurance is an insurance on property against accidents resulting in damage to machinery and structures while in the normal course of erection or construction. The basic concept of EAR insurance is to offer comprehensive and adequate insurance protection against all risks involved in the erection of machinery and plant as well as steel structures of any kind. Before EAR policy was introduced, protection against the main risks arising during erection activities could be provided by concluding a number of individual insurance policies covering the risks of fire, windstorm, floor, third party liability, theft, burglary, etc. However, the cover granted by the separate policies did not afford protection against hazards inherent in project construction.

Nowadays the EAR policy is a preprequisite for sanction of loans from financial institutions.

The sum insured under the policy represents the value of the project and requires to be adjusted at the completion of the erection, testing, and commissioning based on the actual value to be declared by the insured in respect of freight, handling charges, customs duties and cost of erection. In the event of loss or damage, the insured is indemnified for the expenses necessary to restore the damaged machinery to its condition immediately before the occurrence of the damage.

Marine-cum-Erection (MCE) Policy

When the overseas as well as inland transit position of the risks connected with the project are sought to be included in the scope of cover, this MCE policy is useful and incorporates transit cover on all-risk basis as per the institute of cargo clauses. In the marine-cum-erection insurance policies, the cover starts right from the moment the goods leave the manufacturers' warehouse in a foreign country and remains in force during voyage to any Indian port, and thereafter during internal transit to the project site, during storage at site, shifting of goods for purposes of erection and until final completion of erection job, including a testing period not exceeding four weeks.

Contractors All Risk (CAR) Policy

The CAR insurance has been designed to protect the interest of civil contractors against the damages—(a) to civil construction works, (b) contractors machinery at the site and (c) damages during the subsequent period of maintenance for which the contractor is liable to the principal. CAR insurance policy is available for all types of civil engineering projects. CAR insurance policies provide in all risk cover implying that every hazard is covered which is not specifically excluded. This implies that any sudden loss or damage occurring during the period of insurance to the property insured on the construction site will be indemnified.

Contractors Plant and Machinery Policy

Contractors plant and machinery insurance is a comprehensive policy available to the client against unforeseen circumstances. This policy applies to the insured items whether they are at work or at rest, or being dismantled for the purpose for cleaning or overhauling, being shifted within the premises, or during subsequent re-erection, but, in any case, only after successful commissioning. The lose or damage due to electrical failures, mechanical breakdown, replacement parts, explosions, corrosion, war perils, etc., are excluded.

The sum assured is equal to the cost of replacement of the insured property by a new property of the same kind and same capacity. This includes freight, custom duties and erection costs.

Machinery Breakdown Policy

The machinery breakdown policy has been developed to grant industry effective insurance cover for expensive plant machinery and equipments, against unforeseen damages. Besides protecting the project authorities against the financial risk of unforeseen damages, this policy permits the equipment owners to dispense with setting up loss reserves, as these reserves would have to be available at any time to avoid probably illiquidity in case of a loss, and the project management or the contractor would thus be deprived of active capital.

Electronic Equipment Insurance

Electronic equipments such as computers, micro-processors, word processors, telecommunication equipments, medical equipments, television equipments, electronic display boards and electronic instruments are covered under this policy with the scope being all risk. The insurance indemnifies the insured against physical loss or damage due to location perils, breakdowns, faulty effect of moisture, carelessness, riot, strike, and burglary.

The sum insured is equal to the cost of replacement of the property of the same kind and capacity, which means that the replacement cost should include freight, custom duties and erection charges. Besides the above material damage, the sum insured includes external data media and increased cost of working.

The insurer indemnifies the insured against any expenses that can be proved to have been incurred by the insured, within a period of 12 months as from the date of occurrence strictly for the purpose of restoring the insured external data media to a condition equivalent to that existing prior to the occurrence.

Claims Settlement

The procedure for settlement of the claims is discussed below in order to acquaint the project manager with the details. It may eb mentioned that the claim settling authority generally uses its own discretion by recording the reasons for claims settlement.

Intimation of the claim is normally received by letter / telegram / telex / telephone or fax message. Verbal messages are confirmed by written messages. If the claim intimation is in respect of the policy by the concerned office, the project manager is advised assured by another division, a copy of the intimation should be sent to this division as well for getting the claim registration number. The project manager must furnish the details or the policy covering the damaged equipments and the date of damage, including validity of the policy date.

Normally, the preliminary surveyor submits a report within seven days, or furnishes a status report. The final survey report is expected to be submitted by the surveyor within thirty days. The project manager must ensure that he is advised about the status of the survey. In claims involving loss of profit, or deterioration of stock, the insured must arrange for speedy repairs for restarting the equipment, after consulting the insurance.

Claims are also settled on the basis of detailed statements along with photographs and other supporting documents. After the final survey report, the insurance company ensures that there is no breach of warranty, or any special clause or any other statutory regulations. The final bills of repairs are duly verified by the surveyor before the settlement of claims.

Self Assessment Questions

1. Define the term 'Insurance' explain its need in different stages of project life cycle.
2. What is EAR insurance? explain its significance
3. Discuss the significance of CAR policy (Contractors All Risk Poly)
4. Explain the risk cover available for machine breakdown in the project site.
5. Mention the insurance provisions available for electronic equipments

UNIT – VI

PROJECT CLEARANCES

Project's success will depend a great deal on your obtaining the various clearances on time, and completely. Besides the techno-economic and financial clearances, a good number of other clearances are necessary for your project's implementation. While some of them are technical requirements, others are statutory – but all regulated by the Government. Elaborate, long-drawn and expensive procedures are associated with some, while others are simple and quickly obtainable. You must know the essentials of the Government policies, procedures and regulations concerning the various clearances.

All regulatory requirements concerning clearances and licensing would keep changing, from time to time, according to the Central Government's Industrial and Trade Policies. So, when you formulate your project, you must, however, ascertain and comply with the prevailing requirements.

Soil Investigation Report

A proper and complete soil investigation is necessary for designing foundations and tall structures. In view of the previous bad consequences of improper soil investigation, the Government has, through the BPF, made it mandatory that every TEFR must be accompanied by a reliable soil investigation report to support the decision on site selection. The Central Soil Mechanics Research Institute, and Road Research Institute, both in New Delhi; Central Building Research Institute, Roorkee; soil research stations of state governments and many organised small private professional institutions are engaged in rendering investigation services in soil mechanics, rock mechanics, foundation engineering, field investigations and field testing. Depending on the size and nature of your needs, you may engage any one of them and get the investigation done.

Clearance under the monopolies and Restrictive trade practices (MRTP) Act

Till the 1991 Industrial Liberalisation, clearance under the MRTP Act was a must for all new and expansion projects of "large industrial houses" and "dominant undertakings" falling under Section 20 of the Act. After the liberalization the advance clearance requirement has been done away with, and the emphasis has been shifted to controlling and regulating monopolistic, restrictive and unfair trade practices, rather than restricting the growth of large business houses. However, while formulating and implementing your project, you are well advised to check up if any provision of the MRTP Act is applicable to you.

Industrial Licence / Letter of Intent

As per the Central Government's Industrial Policy Statement of 1991, most of the industrial are exempted from licence. Pollution causing projects within 25 km from the periphery of the standard urban area limits of a city having a population of more than 10 lakh according to the 1991 Census, requires industrial licence (IL). Also, medium scale or large scale industries can take up the manufacture of any of the articles reserved for small scale ancillary sector, only if they have licence. Not only setting up new units, but also substantial expansion, take-over of an existing unit, taking up the manufacture of a new article in an existing unit or even changing the location of an existing industrial undertaking in these industries requires licence. This requirement is irrespective of the size of the undertaking. New projects for the manufacture of articles not covered by the said licensing requirements or substantial expansion of existing units requires the filing of a memorandum on the prescribed form to the Secretariat for Industrial Approvals (SIA), Department of Industrial Development in the Ministry of Industry. Such undertakings shall also file another memorandum on the prescribed form with the SIA at the time of commencement of production. Small scale or ancillary units need not file either of these memoranda. Such units shall get themselves registered with the Director of Industries of the state concerned. They shall continue to be exempted from licensing. The Government keeps relaxing licensing requirements with a view to facilitating speedy industrial development. So, when you initiate proceedings for you project approval, you must find out the

latest requirement from the SIA or ascertain it from the Guidelines as amended up to date. The rules are applicable equally to the public, joint and private sectors.

Procedure for Licensing

The procedure for licensing of industrial undertakings explained in this subsection is contained in the Registration and Licensing of Industrial Undertakings Rules, 1952, Notification No. S.O. 98(E)/IDRA/29B/-73/1 dated 16 February 1973 and the Industrial Policy Statements of 1990 and 1991.

The Government had announced a streamlined system for issue of industrial approvals from 1 November, 1973 in respect of applications made on or after that date. This procedure has been reviewed from time to time. Under the procedure existing at the time of writing, letter of intent, foreign collaboration (FC) approvals and capital goods (CG) clearances are to be issued within 30 days of the receipt of applications in each case. Entrepreneurs are encouraged to come to forward with simultaneous applications for IL, FC approval, FE investment approval and CG clearance. In such composite or simultaneous cases, the time target for a simultaneous disposal of the composite application covering the IL, FC, foreign investment and CG import is 90 days.

Consideration of applications for industrial licences and issue of letters of intent / prima facie rejection letters: If an application is approved and further clearances (such as FC, CG imports and environmental clearance) are not involved, an IL is straightaway issued to the applicant. In other cases, a LOI is issued. The licence or LOI will contain such conditions, as may be considered necessary by the Government for implementation of the project.

Letters of intent contain an additional stipulation that within a period of six months, the entrepreneur should make complete application to the funding institutions. The 'complete application' does not mean that the applicant should obtain and submit all clearances required by the financial institutions (FIs). It will be enough if he furnishes all essential information about the requirement of funds from the FIs is broad terms, so as to enable them to make an assessment of the viability of the project and its requirements.

The initial validity period of an LOI is three years. Requests for extensions to letters of intent should be addressed to the administrative Ministry

concerned, which will scrutinize the application and bring it before the Approval Committee with recommendation.

Approval of Foreign Collaboration

Foreign collaboration (FC) encompasses two distinct aspects, namely foreign investment and foreign technology agreement. This section deals with technology agreement while Section 4.6 deals with foreign investment and other foreign exchange clearance aspects. The liberalized Industrial Policy adopted in 1991 permits automatic approval for import of technology in high priority industries, provided the royalty payment does not exceed five per cent of domestic sales and eight per cent of exports, subject to a total of eight per cent of sales over ten years from the date of agreement or seven years from the commencement of production. If a lumpsum payment is involved for the technology transfer (TT), within the aforesaid ceiling limit, the RBI will approve of such lumpsum payment up to Rs.1 crore. Foreign collaboration in priority industries involving payment in excess of this ceiling amount as well as that in non-priority industries would require Government approval. Press note No. 10 of 1991 carries with it a list of 34 groups of high priority industries. It is too long to be reproduced here.

Apart from mere approval of FC, there are many issues concerning TT and FC, which need to be discussed in detail, as these are important aspects of Indian Projects' total management. There are industries in which the Government considers FC not necessary. An illustrative list of these published by the government will be given in Table 6.1. The entrepreneur must know the Government policy, procedures and regulations for both technical and financial participations by foreign parties both.

Application for approval should be made in Form FC(RBI) to the exchange control department of the RBI for cases falling under automatic approval category (high priority industries proposing royalty and lumpsum payments within specified ceiling) and in Form FC (SIA) to the SIA for others requiring specific Government approvals. The detailed procedure will be explained in section 6.5. The application shall seek approval for: (i) foreign investment, and (ii) payment in FE under the following heads.

- Lumpsum payments towards
  - technical know-how fees
  - design, engineering, consultancy, etc., and
  - use of patents, brand names, trade marks and the like.
- Recurring annual royalty
  - as a percentage of the ex-factory value of annual production (net of excise duties), after deducting the all-in total landed cost of imported components, and the standard bought out components, if any.

Import of designs and drawings is allowed without any restriction.

Important of Technology is allowed even under the Government's 'Technical Development Fund' (TDF), handled by the Special Committee for TDF, Department of Industrial Development, R & I Section, in the Ministry of Industry.

Approval for Appointment of Foreign Consultant

Presently, the Central Government agrees to the engagement of a foreign consultant, who is different from foreign technician, only as a subconsultant to render engineering services through an Indian prime consultant. Even subconsultancy by a foreign consultant will be approved only on the following conditions:

1. That he is responsible for the supply of a patented technology which is the basic know-how for the proposed Indian project, and also for the licensing of its use.
2. That his services are necessary for the scrutiny of the detailed engineering done in India, and that such scrutiny has a bearing on the successful transfer of the technology with performance guarantees.
3. That his services are vital in equipment selection and inspection.

4. That his presence is important in quality assurance and observance of standards in construction, for achieving the performance guaranteed by the technology owner.
5. That his supervision is needed for rectification of any equipment failure.

Agreement with the foreign consultant must include time-bound schedules for achievements of targets / milestones, performance guarantees, penalty and bonus clauses, training of Indian personnel and design and introduction of related management practices, and information and communication systems. The agreement must envisage a gradual transfer of his relevant expertise to his Indian counterpart.

Fees payable to a foreign consultant must be a fixed amount, instead of a percentage, and that is payments should be linked with milestone achievements.

We will discuss more about consultants' services vis-à-vis technology, combining it with TT and FC. Fro appointment of foreign consultant, approval is to be obtained in writing from the administrative Ministry, through SIA, with reference to the particulars of consultancy furnished in the IL and FC (SIA) applications.

For hiring foreign technicians in high priority industries Government approval is not necessary. RBI can be directly approached.

Foreign Exchange Clearances

In this section we shall deal with clearances for foreign equity investment and expenditure in foreign currency.

The gist of the policy and procedure governing foreign investment covered by the Industrial Policy Statement 1991 and subsequent notifications issued upto April 1992 is as follows:

(i) Automatic approval will be given by the RBI for direct foreign investment upto 51 per cent of equity in high priority industries. There shall be no bottlenecks of any kind in getting this approval.

(ii) Foreign equity investment upto 49 percent may be allowed in the public sector undertakings to meet their FE requirements. This requires the Government approval.

(iii) To provide access to international markets, majority foreign equity holding upto 51 per cent will be allowed also for trading companies primarily engaged in export activities.

(iv) For a short period, payment of dividends would be monitored through the RBI so as to ensure that the outflow of FE on account of dividend payments is balanced by export earnings over a period of time. (This condition will be removed very soon – may be in 1992 itself).

(v) Foreign equity proposals need not necessarily be accompanied by foreign technology agreements.

(vi) In 100 per cent EOUs and EPZUs foreign equity participation upto 100 per cent is permitted.

Import of Capital Goods

The Government allows import of capital goods (CG) comprising plant, machinery and equipment; raw material, intermediates, components, consumables, spare parts, accessories, instruments and other goods than those regulated by a defined negative list (NL) of imports, for use in projects.

Import and Export Policy (the policy) and Handbook of Procedures (the Handbook) for the relevant period obtainable from the Government Publications Department or booksellers of Government Publicatiosn in your city should be seen for: (i) the latest list of CG permitted for free import, those requiring licence, those not permitted to be imported, and those to be imported through designated canalized agencies; (ii) the procedures to be followed for obtaining a licence or permit for import; and (iii) the titles and addresses of different licensing and approving authorities.

Capital Goods Import Policy

The gist of CG import policy relevant to the years 1992-97 has to be adopted. When you formulate your project you must read the full text of the Policy relevant to that period and its appendices.

- CG may be imported by project enterprises without any restriction except to the extent such imports are regulated by the NL of imports. The NL is given in the Policy. It may be pruned from time to time by Public Notices, or revised every five years. It has three parts as mentioned below:
    - Part I – Prohibited Items
    - Part II – Restricted Items

    (a) Consumer goods

    (b) Precious, semi-precious and other stones

    (c) Safety, security and related items

    (d) Seeds, plants and animals

    (e) Insecticides and pesticides

    (f) Electronic items

    (g) Drugs and pharmaceuticals

    (h) Chemicals and allied items

    (i) Items relating to the small scale sector

    (j) Miscellaneous items

    (k) Special categories

    - Part III Canalised items
- Prohibited items shall not be imported.
- Restricted items may be imported only with an import license.
- Canalised items may be imported through the canalizing agencies like State Trade Corporation, and Projects & Equipment Corporation of India, specified in the NL, unless a special import licence is granted by the

Director General of International Trade (DGIT), formerly called CCI & E, to the project enterprise to import the goods directly.

- CG needed for high priority industries are generally kept outside the NL, and are allowed to be imported at concessional duty of 25 per cent and 15 per cent against respective export obligations of three and four times the CIF value, in four years and five years, respectively.
- Clearances of CG have been made automatic: (i) where CG imports are covered by foreign equity, or (ii) where they are 25 per cent of the value of plant and equipment. For imports, beyond this ceiling, not covered by foreign equity, the project enterprise has to arrange for a buyer's / supplier's FE credit or an external commercial borrowing acceptable to the Government and submit its proposal to the Board of approvals for consideration and decision, including issuance of licence. (In large projects, foreign contractors usually bring credit offers of large amounts from their own countries).
- Second hand CG may be imported without a licence in the following sectors.
  - Printing and allied processes
  - Garments / Hosiery / Made-ups
  - Leather processing / Leather finishing / Leather goods manufacturing / Leather apparel manufacturing.
  - Rubber and Canvas footwear
  - Sports goods
  - Electric lamps
  - Packaging and Packaging material
  - Forged hand tools
  - Oil field services
  - Writing instruments
  - Sea food

- Any other sector as may be specified by a Public Notice issued in this behalf.

- All other sectors will require import license for importing second hand CG.

- Second hand CG to be imported shall not be more than seven years old and shall have a minimum residual life of five years. Imports of second hand CG shall be subject to Actual User Conditions (AUC) as stipulated in the Policy.

- All second hand goods, other than CG may be imported in accordance with a public Notice or a licence issued for this purpose.

- The following CG may be imported on re-export basis without a licence on execution of a bond / bank guarantee undertaking the re-export, to the satisfaction of the Customs authorities:

  - CG for reconditioning;
  - Jigs, fixtures, dies and patterns (including contour roller dies), moulds (including moulds for die casting) and press tools; and
  - Construction machinery and other equipment.

- Imported CG or parts thereof may be sent abroad for repairs and re-imported without a licence but subject to the satisfaction of customs authorities that the re-imported goods are the same as the goods that were exported.

- Indigenous CG having imported components may be sent abroad for repairs after obtaining a licence from the DGIT/CCI&E for such export on re-import basis.

- After completion of an overseas project, the project contractor may import, without a licence, the used construction equipment, machinery, related spares, tools and accessories on the basis of production of evidence of their purchase for use in the overseas project. Used office equipment and vehicles may also be imported after completion of the project abroad without a licence, but subject to the condition that they have been used for at least one year.

- Both new and second hand CG may be imported under "Export Promotion Capital Goods Scheme" (EPCG) under concessional rate of customs duty, for use in the production of goods for export. The duty concessions at the rates of 25 per cent and 15 per cent of the CIF value are linked with export obligations of three times the CIF value in four years and four times the CIF value in five years, respectively.
- For import of goods needed for production for: (i) exports under specified external multilateral or bilateral financing arrangements, and (ii) supply of CG and other inputs to EPZUs / EOUs, ONGC, OIL and GAIL, a Special Imprest Licence (SIL). SIL is available also for production for supply of CG for fertilizer plants in India.

Approval for Setting up Export Oriented units

The essentials of the procedure are the following.

- For approval for setting up EOUs and EPZUs, the application shall be submitted to: (i) the SIA, for EOUs; and (ii) the Development Commissioner (DC) of the EPZ concerned for EPZUs.
- Conversion of an existing non-EOU called Domestic Tariff Area Unit (DTAU) into an EOU may also be permitted. For this purpose, the DTAU may apply to the SIA in the same manner as applicable to new units. Concession in duties and taxes shall, however, be available under the scheme only for plant, machinery and equipment installed, after the conversion.
- For EOUs/EPZUs automatic CG import approval is available if they are fully covered by foreign equity, or if they do not exceed 50 per cent of the value of plant and equipment. Application for automatic approval shall be cleared by the DC concerned of the EPZ for EPZUs, and by the SIA for EOUs. These clearances shall be given within 15 days if the applications meet with the specified conditions.
- Applications for CG import not qualifying for automatic approval shall be forwarded by the DC or SIA to the Board of Approvals for considerations and decision. In deserving cases the Board grants approval within 45 days.

- The following goods required by it for production, provided they are not prohibited items in the NL.
  1. Capital goods (whether new or second hand) including generating sets.
  2. Tools, jigs, fixtures, gauges, moulds, dies, instruments and accessories.
  3. Raw materials, components, consumables, intermediates, spares and packing materials.
  4. Prototypes and technical samples not exceeding two in number of each type for product diversification, development, or evaluation.
  5. Material handling equipment like fork-lifts and overhead cranes.
  6. Drawings, blueprints, charts, microfilms and technical data.
  7. Office equipment and spares and consumables thereof.
- The duty free import by EPZUs shall be subject to the following conditions.
  - The goods shall be imported into a customs bonded factory.
  - The normal procedure that is applicable for customs bonding shall be followed, including transit bond for the purpose of foods being taken from the port of importation to the factory premises; and
  - Import of prohibited items in the NL shall not be allowed.
- EOUs and EPZUs are permitted to import second hand CG in accordance with the provisions contained in Chapter V of the Policy.
- For import of second hand CG the importer shall produce to the Customs authorities, at the time of clearance, a certificate from a professional independent chartered engineer or an Institution of engineers in the exporting country, giving the particulars fo the age and residual life.
- Import of second hand CG that are more than seven years old with a residual life of less than five years may also be considered by the Board of Approvals on the merits of each case.

- The approving authority for import of second hand CG for EOU/EPZ units is the Board of Approvals.
- The units may be allowed to re-import, after repairs abroad machinery / equipment exported by them for this specific purpose. Any FE payment for this purpose will also be allowed.
- Import of CG through domestic leasing companies fulfilling notified eligibility conditions and having a leasing agreement with an EOU/EPZU will be considered under the normal procedure for import of CG applicable to such units. The application should be accompanied by a copy of the lease agreement.
- In the case of CG procured from indigenous sources on the basis of lease agreement between the leasing company and the EOU/EPZU the leasing company will be eligible for Central Excise exemption, but no such exemption would be permitted under the scheme for CG already purchased or owned by the leasing company.

Environmental / Pollution Control Clearances

You are entering one of the very important and controversial areas of project clearances, involving the Central and State Governments' Ministries of Environment and Forest. Additionally, the World Bank group and other financial institutions will clear their funding proposals only after satisfying themselves that adequate measures have been planned and their management organised for environmental care, covering all aspects of the environment, including preservation of forest, natural resources, sanitation and human, animal and plant lives.

The Central Ministry of Environment and Forest has its own guidelines prepared in the 1980s for projects in the following sectors:

- Shipping and Harbour Projects
- Development of Beaches
- Mining Operations
- River Valley Projects

- Sitting of Industrial Projects
- Thermal Power Plants

There are also the Environment (Protection) Act, 1986; Water (Prevention & Control of Pollution) Act, 1974; Water (Prevention & Control of Pollution) Cess Act, 1977, and Air (Prevention & Control of Pollution) Act, 1981, the provisions of which have to be complied with, in planning and implementing the project and operating and maintaining the plant.

The Central Pollution Control Board and the Bureau of Indian Standards have prepared non-statutory effluent standards known as minimum national standards (MINAS) for the 11 water polluting industries. Emission standards for 13 air polluting industries have also been prescribed. Standards for 11 industries that have been statutorily notified under Environmental (Protection) Act, 1986, include: caustic soda, man made fibre, oil refinery, super thermal power plants, cotton textiles, composite woolen mills, cement, electroplating, dyes and dye intermediates and stone crushing. The Ministry has classified industries into three categories – 'red', 'orange' and 'green' for the purpose of inspection and enforcement of pollution control statutes. Those in 'red' category will cause pollution to a high degree, while 'orange' and 'green' are pollution causing industries of a lower order. The frequency of inspection is high for the red, medium for orange and low for green.

Clearance from the International Airport Authority

The location of a project close to an airport should be selected in consultation with its clearance so that the two do not interfere with each other and, at the same time, support each other's operations.

Railway Clearance

The IL application has a section dealing with rail transport requirement. The SIA gets it cleared by the Railway Ministry's department concerned so that you can, on that basis, follow up with that Ministry to meet your requirements of:

- Marshalling yard;
- Railroad to your site;
- siding, handling and special facilities including special types of wagons required at the dispatching and receiving stations, for dispatching and receiving raw materials and finished goods;
- wagon allotment; and
- upgradation of the serving railway station, if necessary

Where IL application is not necessary, you must deal with the Railways in this regard directly, and not through the IL application.

Electricity Clearance

Depending on the size of the requirement, clearance should be sought from the State Electricity Board (SEB) or the Central Electricity Authority (CEA), in consultation with SEB, for power supply. The total power requirement broken down between: (a) to be met from own captive generating station, and (b) to be availed of from power supply; and detailed with (i) connected load (in kW) and (ii) maximum load (in kW) should be given, for clearance. In case of own generating station, you are expected to give full particulars for the station you propose to install, and show its capital cost separately in project estimate.

Explosives Clearance

Clearance from the Chief Controller of Explosives (CCE), Nagpur, is necessary for handling all explosive materials during construction and / or operation. Blastering in a stone quarry and for doing earthwork in hard rock is a common operation in project work needing procurement, storing, handling and transportation of explosives. For all these you need the permission of the CCE, under the Indian Explosive Act and Rules.

Forest Clearance

Forest Clearance is as important as environmental clearance. Every project involving de-reservation of reserve forest or diversion or use of forest land needs clearance under the Forest (Conservation) Act, 1980, and Forest (Conservation) Rules, 1981. This clearance is to be given first by the State Government and then by the Central Government.

State Industries Department Clearance

Clearance of State level projects and small scale units are handled by the State Directorate of Industries (SDI) concerned. For Central projects requiring II, the SDI's locational, infrastructural, environmental and forest clearances have to be obtained first. A copy of the application for IL may be endorsed to the SDI. Environmental and forest clearances are necessary in all cases.

Sales Tax Registration: The unit should get sales tax (ST) registrations before it starts purchase of equipment so that the available ST benefits can be availed of.

Conclusion

A good many clearances are necessary for setting up a project. They call for extensive study and large volumes of paper work.

For obtaining the clearances without delay, your study team must do a lot of fast follow up work, ensuring that the applications do not get stuck anywhere beyond the minimum required period. Simultaneous submission of all the applications, complete with all the required details and supporting documents, and quick clarifications to all questions raised by those who scrutinize the applications will help you get the clearances in about three months time, but be prepared for a little longer period, as many of our people are quite fast in 'saying' but slow in 'doing'.

Self Assessment Questions

1. Explain the need for obtaining project clearance
2. Discuss the process of obtaining clearances from the pollution control board.
3. What are import provisions of getting foreign exchange clearances?
4. Discuss the process of getting approval for setting up of export oriented units.

MODEL QUESTION PAPER

Paper 3.5: PROJECT CONTRACTING AND CLEARANCES

Time: 3 hours

Maximum Marks: 100

PART – A (5 x 8 = 40 marks)

Answer any **Five** questions

1. What do you mean by the term 'project contracting'? Explain its significance.
2. What is BOOT Contracting? Explain its significance.
3. What is Turn Key Project? Explain its merits and demerits.
4. What is project negotiation? Explain its objectives.
5. What are all Inco Terms? Explain them briefly.
6. Explain the need for knowledge of legalities in project contracting.
7. What is EAR insurance? Explain its significance.
8. Explain the need for obtaining project clearance.

PART – B (4 x 15 = 60 marks)

Answer any **Four** questions

9. Explain the components of BOOT contract package.
10. Explain the different types of pricing contracts
11. What is arbitration? Explain the situation and process of arbitration.
12. Explain the duties and rights of an agent.
13. Discuss the significance of CAR policy (Contractors All Risk Poly)
14. Discuss the process of obtaining clearances from the pollution control board.
15. Discuss the process of getting approval for setting up of export oriented units.

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